

AMERICAN GAS ASSOCIATION

Monthly

DECEMBER
1958



JUNE and FRED MACMURRAY say:

*"Make this your Merriest Christmas ever—
give a Gas Appliance!"*

Give an **RCA WHIRLPOOL**
Gas Range like ours—
for quicker, cleaner,
cooler cooking—*automatically!*"



AUTOMATIC! Burner-with-the-Brain* ends potwatching on an RCA WHIRLPOOL Gas range! It regulates flame up—or down—*automatically*—to hold to the temperature you set. Food just *can't* scorch or burn on this miraculous unit!



AUTOMATIC! Choose RCA WHIRLPOOL automatic features in built-in or free-standing Gas ranges. What's your dream? A custom kitchen... lots of surface units... an extra oven? It's easily, economically yours—any Gas appliance *costs less to buy, install and use!*



A QUICKER, COOLER COOK! No time's wasted when you cook with Gas! No warm-up wait. Turn the heat on, and it's *on*. No hangover heat, either, to warm the cook or the kitchen. Want the fastest boil or slowest simmer (or any heat in between)? Gas responds at a touch.

A BETTER, HAPPIER COOK! Who couldn't cook better with automatic Gas appliances doing the chores! Set a dial—this range keeps a sauce at a simmer *without scorching*; set another—and it roasts a turkey to a turn—bastes it *automatically!* AMERICAN GAS ASSOCIATION



ONLY GAS  **does so much more...for so much less!**



A familiar New York landmark at Christmas time is this giant tree standing at the Rockefeller Center

THE PROBABILITY of public injury, fatality or property damage from the operation of natural gas transmission lines is so negligible as to be almost nonexistent. . . . So begins Stanley Owens, chairman of A. G. A.'s Subcommittee on Safety and Gas Transmission, in a by-lined story on page 2. Mr. Owens, director of safety for Transcontinental Pipeline Corp., makes this conclusion as a result of findings of a public safety survey. The study covers the safety experiences of the nation's 90 major transmission companies from 1940 through 1955. . . . The Southwest Research Institute has developed an improved gas absorption air conditioner. On page 3, the Institute reports that, compared with similar systems previously developed, the system shows a 50 per cent improvement in performance, a 30 per cent reduction in fuel consumption and a 25 per cent reduction in cooling water requirements. . . . One of the final audiences granted by the late Pope Pius XII was before delegates attending the Seventh International Gas Conference of the International Gas Union. The Pope spoke for 17 minutes on gas. His remarks are reported on page 14.

JAMES M. BEALL
DIRECTOR, PUBLIC INFORMATION
WALTER H. DYER
EDITOR
RICHARD F. MULLIGAN
ART SUPERVISOR
JANE POWELL
NEWS EDITOR

EDITORIAL OFFICES:
AMERICAN GAS ASSOCIATION
420 LEXINGTON AVE., NEW YORK 17, N.Y.

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Study confirms pipeline safety

*Survey shows public injury,
property damage almost nonexistent in
operation of transmission lines*



By STANLEY OWENS

*Chairman,
Subcommittee on Safety and Gas Transmission
and
Director of Safety
Transcontinental Gas Pipe Line Corporation
Houston, Texas*

The probability of public injury, fatality or property damage from the operation of natural gas transmission lines is so negligible as to be almost nonexistent.

These conclusions summarize the findings of a public safety survey recently completed by the Transmission Subcommittee of the American Gas Association's Accident Prevention Committee. The study covered the safety experiences of the nation's 90 major transmission companies from 1940 through 1955. These companies operate more than 152,500 miles of pipeline in 43 states and the District of Columbia.

During the 16-year period, four members of the public lost their lives and 93 were injured as a result of natural gas pipeline failures during actual operations. Two of the fatalities resulted from one accident. Public property damage totaled only \$631,847.

The transmission segment of the gas industry has always believed and consistently stated that its pipelines are constructed and operated safely. The new data gathered by the A. G. A. subcommittee clearly and unequivocally substantiates this contention.

The background behind the recent survey indicates the value of the study to both the gas industry and the public.

Since about 1940, the natural gas transmission network in the United States has been growing at a phenomenal pace. In many states, particularly those in the more densely populated areas of the northeastern and northwestern United States, natural gas and the transmission pipelines entered as strangers. Because they were new and unfamiliar, some concern was evidenced by residents and public authorities over the safety aspects of natural gas transmission pipeline operation. This concern extended even into the ranks of engineers, real estate developers and members of the legal profession in communities newly introduced to natural gas.

Thus, as its new pipelines reached into heavily populated areas, the gas industry found it urgently needed a yardstick with which to measure the public safety operating record of such lines. In 1955, the Transmission Subcommittee of A. G. A.'s Accident Prevention Committee voted to survey the nation's transmission companies and assemble vital statistics on gas pipeline safety experiences.

The subcommittee learned that 91 natural gas transmission companies were in operation as of Dec. 31, 1955. These included 38 classified as "natural gas pipeline companies" by the Federal Power Commission under the Natural Gas Act.

This classification, as used in the subcommittee study, generally refers to "companies whose transmission line mileage exceeds 250 miles and whose sales for resale are more than 50

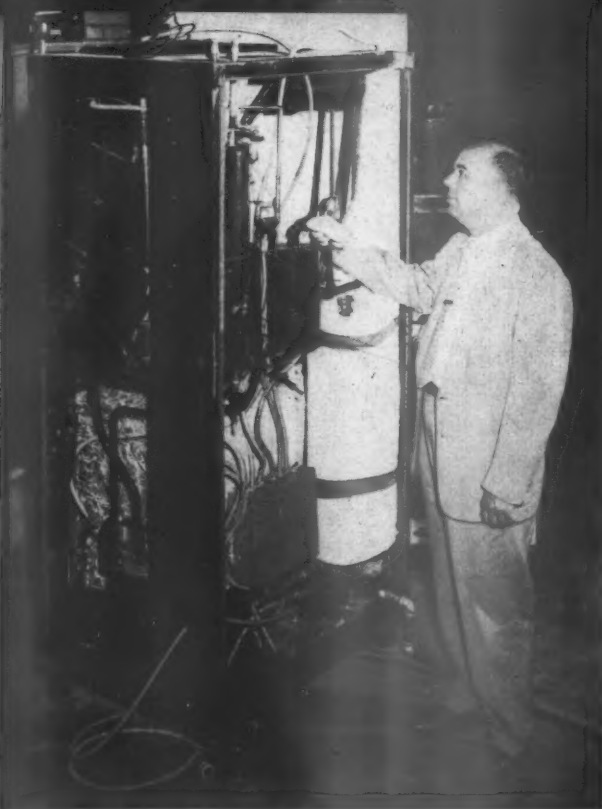
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E.P. Whitlow inspects improved gas-fired absorption air conditioning system

Develop improved gas absorption air conditioner

As compared with similar systems previously developed, a gas-operated absorption refrigeration system developed by Southwest Research Institute shows a 50 per cent improvement in the coefficient of performance, a 30 per cent reduction in fuel consumption and a 25 per cent reduction in cooling water requirements.

The system can also be used for heating and thus provides year-round air conditioning. It was invented and developed by the Institute's department of chemical engineering in a two-year research program for the American Gas Association.

The development work at Southwest Research Institute involved the use of lithium bromide and water as the absorbent refrigerant combination and resulted in the incorporation of the multiple effect evaporator principle in the generator design so that it became possible to produce more refrigerant than that equivalent to the latent heat absorbed in the generator.

(These excerpts from a paper by Dr. Eugene P. Whitlow, chairman, chemical engineering department, Southwest Research Institute, are reprinted from "Tomorrow Through Research," a publication of Southwest Research Institute, San Antonio, Texas.)

Heat from a gas burner is supplied to a "first effect generator" and some of the refrigerant is boiled out of the dilute solution returning from the absorber. The mixture of liquid and vapor is separated and the partially concentrated absorbent flows through a heat exchanger and into the second effect generator.

How vapor is used

The vapor from the first effect generator passes around the outside of the heat transfer coil and condenses. The heat from this condensing vapor boils a second portion of the refrigerant from the solution and further concentrates it to its final concentration. The vapor from this second boiling passes upward and into a condenser where it is joined by the condensate from the second effect generator. The sum of these two quantities of refrigerant is therefore approximately twice that equivalent to the latent heat absorbed in the first effect generator.

The same system can be used for heating. By shutting off the supply of cooling water to the absorber and condenser and opening the heating valve, the hot vapor from the generator will flow directly into the evaporator which now

becomes a heating coil. The hot vapor will be condensed inside the evaporator tubes and will give up its heat to the air flowing through the coil. For heating it is necessary to add additional generator capacity to supply enough heat.

The incorporation of the multiple effect evaporator principle into the generator of this system called for some rather radical departures from previous design concepts. In order for the water vapor to condense in the second effect generator it was necessary that its pressure be increased to approximately one atmosphere. This in turn caused an increase in temperature in the first effect generator. The high pressure in the first effect generator also meant that the thermal-siphon type of liquid circulation previously used would not work under these conditions. This higher pressure difference between the various components of the system also meant that solution traps could no longer be used to separate the high pressure areas from the low pressure areas. All of these factors affected the problems concerned with the automatic control of this system.

A mechanical pump to promote cir-

(Continued on page 27)

Million-a-year gas refrigerator sales possible in 5 years

Mr. Gray calls gas refrigeration the key to greater industry sales



Bulkier insulation limits interior space on this model

By ELISHA GRAY, II

Chairman of the Board
Whirlpool Corp.
St. Joseph, Mich.

That you invited a speaker to talk about refrigeration at the annual convention has positive implications. It indicates you believe a giant is stirring and important things are on the horizon for this gas-load creating appliance.

This paper deals with the refrigerator market and the refrigerator as a product. It includes the past, the current situation, and the potential future.

Whirlpool Corp.'s interest in every facet of the gas industry is very real and pressing. We currently are investing more energy, more enthusiasm and more money in the appliance end of the gas industry than any other manufacturer.

Looking back, the refrigerator, as a home appliance, reached its peak sales in 1950 when six million units were sold. This includes Korean War scare buying. Even so, authorities then were estimating that the steady, annual figure of four to four and one-half million units would continue as a base, gradually rising until 1958 when it would be, in their opinion, five to five and one-half million units sold annually.

Exactly the opposite has happened. Refrigerator sales have dropped from six million units in 1950 to a point where the industry will be fortunate to sell two and one-half million units this year. The forecasters are so unnerved by this that they now are uncertain as to what to expect in the immediate future.

This shrinking volume of sales per year, I believe, has resulted because the product has not seen sufficient technological change to attract customers. The customers' dollars have gone to more exciting new appliances. Television reached nearly 100 per cent saturation in ten years. Laundry equipment, with new improvements in automaticity, has taken the attention from refrigerators. We have not added similar new ideas to the refrigerator since 1950, and the life of a refrigerator has been longer than originally anticipated. Thus, the housewife has been content to keep her food cold in an antiquated refrigerator.

As a result, there are more than 48

million refrigerators in use today. More than 18 million have been in service nine or more years. One out of two refrigerators now in use has no frozen food storage space. Thirty-three million still in operation have manual defrosting.

As to the future, we are soon to see a dramatic reversal of past trends, and the beginning of an upward climb which will bring the refrigerator volume to more than four million units a year by 1961. I think it will go on up to five million units a year by 1964.

Here are the salient factors which will create this turnabout. First, there is the underlying thrust of a growing population, and the acceleration of home formations that should begin in 1960 and continue thereafter. In the area of things about which we can do something, the rate of obsolescence of refrigerators will be greatly accelerated in the immediate future.

This will be brought out primarily by three technical developments which will so change the character of the refrigerator that it once again will be an exciting purchase. The refrigerator will take its place as the leader in home appliances, a place it relinquished four years ago.

The first development is the automatic ice cube maker, until recently available only on gas refrigerators. Admittedly, it would be a great sales stimulant if it could be exclusive. However, one is offered on an electric refrigerator, and they will soon be standard equipment on the higher priced electric units. A recent survey showed that 93 per cent of the people owning a gas refrigerator thought its most important feature was the automatic ice cube maker.

The second development coming fast is thin-walled insulation. There are several new developments which suggest that soon we will probably be able to use one and one-half inch or one and three-fourths inch insulation in the refrigerator walls. This will give designers all kinds of ways to create exciting new concepts of refrigerator configuration.

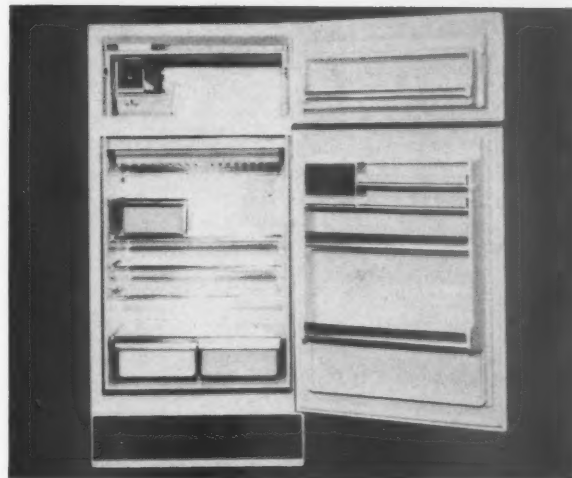
To give you an idea of how big a step this is, a standard 11½-foot refrigerator becomes a 15½-foot unit when it uses 1¼-inch insulation.

The third development will be frost-free refrigeration where all frost is con-

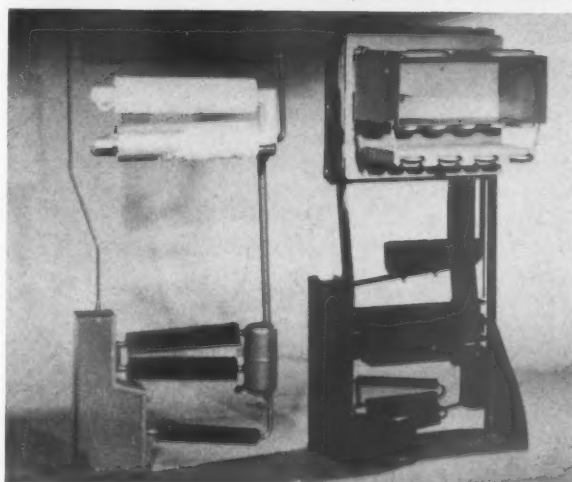
This new model is more compact, and will be available during 1959



Thinner insulation, new interior layout will allow more space for food



Comparison of systems shows advantage of prototype being developed



finned to areas outside the refrigerator. Defrosting will be eliminated.

With these developments and with sales of the general order I have estimated, refrigerators will again be the keystone of home appliance merchandising. It follows that we, whose business is concerned with the profitable sale either of the appliance or its fuel, or both, should make plans to aggressively move, and ride, this bandwagon as it gathers strength uphill.

In 1948, almost 400,000 gas refrigerator units were sold. This figure represented 8 per cent of the market. That dwindled steadily and last year it was almost non-existent. Therefore, of the substantial drop which occurred in total refrigerator sales, at least 400,000 units are accounted for by the demise of the gas refrigerator.

You, and we, have undertaken to reverse that situation and restore gas refrigeration to greater heights than ever. During the past nine months, I have asked many gas utility people what they thought a proper expectation of the long range sales picture might be. The replies varied greatly. In order to crystallize this crusade a little more, I shall venture my own target figure.

To estimate the sales levels which can be reached with a gas refrigerator, one first must ask how good a refrigerator it's going to be. My guess assumes a gas refrigerator competitive in first cost, and competitive in general performance to an electric refrigerator.

Such a refrigerator is now being developed. It is not yet an accomplished fact, but there is a bright gleam in the engineer's eye as he checks its progress. So, to simplify the forecast and provide a basic assumption on which to build, I assume a gas refrigerator competitive in all respects with the electric boxes.

With a household gas refrigerator such as this, I believe that 25 per cent of the annual sales of refrigerators will be gas units. Given a competitive gas refrigerator, I look for more than a million units a year to be sold when the product and the market are developed.

It is my guess that it will take five years to accomplish this. If such a forecast should be accurate, the merchandising of refrigerators would be a profitable and essential activity for all gas utilities to pursue. The annual load building increment will be in the neighborhood of \$25 million per year, and, it is cumulative.

What is the chance of getting such a

competitive gas refrigerator? I can make no promises or predictions. I prefer to report the facts as I know them and let you draw your conclusions. At Whirlpool, we have undertaken to re-create the gas refrigerator on a three-phase basis. Phase one was to reactivate the manufacture of the gas system used by Servel, and make what face-lifting improvements could be made to the cabinet. This we have done. We have shipped 15,000 gas refrigerators to date and we are manufacturing at a rate which meets the current market demand.

Phase two was to put the gas absorption system in the modern, square-look box, in order to gain the economies which could be had by using the same box and assembly facilities as the electric model. This refrigerator, the prototype of which was on display in the "Parade of Gas Progress," will be available about the middle of 1959 and will be extremely modern.

It will use the same refrigerating system presently used, but it will incorporate manufacturing improvements we have made in the interim. We will change to insulation of a polyurethane nature which will enable us to use the same wall thickness in this refrigerator as is used in the electric unit.

Ultimate improvements

Phase three is the "big prize." We are searching for a truly competitive gas refrigerator, and we are currently devoting substantial sums of money to this research project. More important to all is the fact that we believe we are approaching our goal. However, in my own manufacturing experience, I have suffered so many disappointments between the time when an idea looked bright in the research laboratory and the time when we finally got it in shape for the market, that I have learned to be cautious about prognostications of this sort.

But, let me give you a progress report. The present gas system in an 11-foot box compares with the new gas system we have just built in our laboratories. The latter unit went on test in our calorimeter rooms Oct. 1 in a 13-foot box, a two-foot gain in storage space. Its performance encourages us to think that it will duplicate the box conditions of an electric compression refrigerator. Even the untutored eye can see that it is a simpler mechanism.

This new system weighs 90 pounds less than its predecessor. New tech-

niques promise to simplify the welding problem. This new system weighs only one-half as much as the old one, has fewer than one-third as many welds, and will refrigerate 18 per cent more space. Its configuration is such that it does not have to be set dead level to operate. There is more give and take in its adaptability in the home. Our engineers are 90 per cent sure that this can be developed and produced in a mass manufacturing way. If so, obviously great economies will result and while we have preliminary estimates of these savings, they are still so uncertain that I will not use them.

Other good companies are also putting their efforts into this endeavor, and we should all be confident that out of a total effort, a successful gas box will emerge.

While manufacturers are making their investment in an attempt to create this marketable product, you must make your investment to keep the market open—to keep the market alert and eager for the emergence of this and other improved products.

The refrigerator has been called the keystone product of the kitchen. It earned this position because it has priority in its necessity. Most merchandisers feel that when they sell a refrigerator utilizing gas the rest of the appliances will almost automatically use gas.

To be conservative, we can say that if a customer buys a gas refrigerator, the chances of her selecting other gas appliances are enormously improved. This would be especially true with a glamorous, modern new line of gas appliances. Therefore, the refrigerator is what I call a leverage item. Its real profitability must be measured not only by its own individual contribution to load, but also by the leverage it supplies for the sale of the other gas appliances.

This leverage is especially effective in selling to the new home and kitchen remodeling markets. People who contract for new homes, builders who build new homes for sale, and existing homeowners who contract for kitchen remodeling like to specify and install either an all-electric kitchen or an all-gas kitchen.

There are obvious reasons why anyone would want to install all appliances in either one fuel or the other, and there is a very distinguishable trend in this direction. For these and other reasons, I predict that the gas refrigerator will emerge as the key to a more profitable gas appliance business.

Baltimore Gas devises accurate method for measuring work data

By HENRY H. MILLER

*Superintendent
Gas Service Department
Baltimore Gas and Electric Co.*

Determining the work performance of servicemen is one of the principal responsibilities of supervision in a large service organization.

Servicemen work on a variety of jobs each day with limited direct supervision, which makes it difficult to measure accurately their work performance. The use of a relatively simple standard such as "jobs per work period" does not give a true measurement of the work performed because of the wide variation in the kind of work servicemen are required to do.

To evaluate correctly a serviceman's performance, we must give recognition to both the type of work performed and the travel time or amount of time used in traveling between jobs. It is equally important that any system employed must present a clear and easily understandable statement of these factors.

The system developed in the gas service department of the Baltimore Gas and Electric Co. provides data on the performance of the field personnel in the department, combinations of these individuals and for the entire field force. Each analysis of service work performance produced by the system has a specific value to various levels of depart-

mental supervision.

The system has been in effect for approximately one year and has proved to be an effective work control medium for departmental supervision. The application of the system has improved the gas service department's supervisors' ability to evaluate manpower, direct personnel training, assign work more effectively and, in general, improve department operations.

The necessary performance data used in the operation of Baltimore Gas' work performance evaluation system is collected from specially designed daily time sheets on which the servicemen report their activities. Time sheets, after processing by the clerical force, are complete and account for all time paid for as work time. The data used in the preparation of work analysis reports are compiled by means of IBM processing equipment. The work analysis reports are subsequently prepared as tabulations in a form that is easily understood and readily applied by all levels of supervision.

A brief description of the work performance evaluation system in effect in our company and the methods used to code the type of work performed, the status of the job worked by an individual and the method of calculating work performance evaluations, are as follows:

To simplify the reporting of the type of work done, a numerical code is used. These numerical codes are called func-

tion codes and are assigned to all activities including maintenance, construction, operations and nonproductive time.

The status of a job is reported by the use of the following work status codes:

- 0 Nonproductive time.
- 1 Work completed on the first call.
- 2 Work done in addition to original customer's request.
- 3 Uncompleted work.
- 4 Work completed on subsequent calls.

To evaluate a man's work performance, a relationship or ratio is calculated between the man's reported work time and previously established standards or normal times for the jobs. The ratio of actual work time to normal work time is called the man's per cent performance. When a special job is performed for which a normal work time standard has not been established, it is assumed that the normal work time is the same as the actual work time in calculating the per cent performance figures.

To determine a man's per cent performance as it relates to travel time it has been necessary to establish standards for the time required to travel a mile in various parts of our service area, with consideration being given to whether the work is done on the day or night shift. Multiplying the reported miles traveled by the established average travel time per mile for the appropriate area produces a total number of hours, or normal

travel time. This normal travel time is then compared with the man's actual travel time as reported on the time sheet to obtain the man's per cent performance as it relates to the time he spent traveling between jobs.

Summations of the related per cent performance for work and the per cent performance for travel time produce the combined per cent performance figures used to grade the over-all performance of individuals and combinations of individuals.

A variety of tabulations are produced for administrative use by departmental supervisors. These include summary and detail tabulations which enable supervisors to trace sub-par performance with-

out time-consuming investigations.

The data in the tabulations are arranged so that any change in the department's performance may be traced through groups of individuals under the supervision of specific foremen to particular individuals in one of the groups.

This system has proved valuable in directing attention to those individuals whose performance should be improved, principally through additional instruction and training. In addition, the system has eliminated the necessity of preparing manual tallies of data for operating reports. The data collected by the system provides the basis for special studies and basic information used in the preparation of departmental budgets.

The tabulations showing the geographic distribution of the work load by service grids are a valuable guide in the selection of locations for decentralized work centers and for the study of service call dispatching operations.

The cost of obtaining the data and preparing the work performance tabulations is estimated to be approximately one-half of 1 per cent of the department's annual field payroll. The saving that results from the use of an effective system that provides both real and psychological assistance to all levels of supervision in the development of personnel and improvement in a gas service department's work performance depends on the application of the system.

Meet your Association staff



Kenneth F. Muldoon

Kenneth F. Muldoon, A. G. A. Advertising Manager, sports enthusiast, bridge player extraordinary, a real family man and a good church baritone, has two major goals for 1959: to continue the highly effective gas industry printed and TV advertising program, and to make it an even more important part of the industry's "forward look."

Ken has been called the "fastest rising executive at A. G. A." He was promoted twice this year within a 10-day period—from manager of the New Freedom Gas Home Bureau, to promotion manager, to advertising manager.

At New York and Columbia universities, he majored in accounting. He has served as assistant treasurer of the Gas Appliance Manufacturers Association, sales manager for Gas Refrigerator Distributors, Inc., treasurer of Servel New York Corp., and regional sales manager at Eureka-Williams Corp. (Williams Heating Division). Before joining A. G. A. in 1955, he was merchandising manager for Thatcher Furnace Co.

Ken lives in a Tuckahoe, N. Y., Dutch Colonial on a half-acre of ground that is "turning me into a week-end gardener." He is a vestryman in the Episcopal Church, where he sings baritone in the church choir on Sunday. He also sings "most any old way at home in the shower on week days."

His wife, Hulda, a soprano, also sings with the choir, as does daughter

ter Cary, an alto. His son, Scott, is president of the Eastchester High School freshman class, and daughter Cary is vice-president of the Eastchester High School junior class. Their oldest, Ro-Anne, is a college junior.

Unlike most New Yorkers, commuting is a pleasure for Ken. He leaves home at 8 a.m., catches the first train out, and, when he isn't busy reading trade publications, gets in a rubber of bridge before arrival at Grand Central Station. It's the same on the 5:30 p.m. train each evening.

At A. G. A., he coordinates the creative work of two advertising agencies, and informs the Domestic and Industrial and Commercial Advertising Committees of current Association programs. Campaigns are slanted toward the consumer through shelter and service magazines and television, and the industrial and commercial customer via trade journals.

Lennen & Newell, New York agency, does the consumer print and television advertising, while Ketchum, Macleod & Grove, Pittsburgh firm, handles the industrial and commercial account.

Ken finds time to play "much" bridge, bowling and golf, "and one of these days, I'm going to take Norv Jennings at golf—without a handicap."

But win or lose, Ken says "it's cause for celebration when I break a hundred."

Fry-top range study released

Preheating speeds of contemporary fry-top range top sections can be increased by more than two and one-half times without appreciable loss in water heating efficiency by increasing heat input rates.

This is one of three major conclusions reached as the result of research on commercial fry-top ranges by the American Gas Association Laboratories. These findings are reported in Research Report No. 1284, recently issued by the Laboratories.

The report, *Heat Application to Commercial Range Heavy-Duty Top Sections, Part IV—Fry-Top Ranges*, covers research on heavy-duty commercial fry-top range top sections conducted under the Association's PAR Project IA-5. The project was sponsored by the A. G. A. Committee on Industrial and Commercial Gas Research.

The purpose was threefold: (1) to obtain increased preheat speeds of the top section, (2) to improve uniformity of top plate temperature, and (3) to determine the practicability of designing the fry-top for thermostatically controlled operation.

Two heavy-duty fry-top commercial ranges of contemporary design were used for this research. However, all experimentation, except thermostat life studies, was performed on one unit. The unit had a 200-pound top plate measuring $31\frac{3}{4}$ inches side to side and $33\frac{1}{2}$ inches front to rear. The fry-top was originally rated at 45,000 Btu per hour and was equipped with two parallel "U"-shaped burners extending from front to rear.

During initial studies, the performance characteristics of the appliance were studied with the unit operated in a normal manually regulated manner.



Pictured is the experimental burner arrangement used by the A. G. A. Laboratories to improve the heat uniformity on a commercial heavy-duty range fry-top plate

For comparison, the performance was again studied after subjecting the appliance to thermostatic control.

It became apparent from initial work that better control of aeration could be provided since large amounts of excess air passing through the combustion chamber carried too much heat off to the atmosphere. Through studies of air flow through the combustion chamber, a new level of uniform top plate temperature was achieved by properly locating burner ports and by controlling the flow of combustion air as well as combustion products.

The application of thermostatic control to the top section was also found to be practical, and particularly desirable where high heat input rates are used. Attempts to apply thermostatic control to the fry-top plate proved successful only when the control was spe-

cifically designed for this type of heavy-duty use by a cooperating controls manufacturer.

Additional studies were conducted with three and with four experimental atmospheric high input bar burners mounted in the combustion chamber. Each burner was rated up to 40,000 Btu per hour. This arrangement provided maximum rated inputs of 120,000 and 160,000 Btu per hour. Each burner was 21 inches long and had two rows of 80 No. 36 DMS ports firing at an angle of 20 degrees above the horizontal.

Factors governing satisfactory side-to-side temperature distribution and the effect of varying the number of and the spacing between the parallel bar burners mounted from front to rear of the combustion chamber are discussed in the report. Also discussed is

the effect of varying individual burner heights and input rates, effect of fire brick, reflector plates and baffles and the effect of flow control. In a number of cases, "isotherms" of resulting top plate temperatures are presented.

By matching heat application to variations in thickness or mass of a fry-top plate, a high level of uniformity of top plate temperatures can be obtained.

With one experimental arrangement, 94 per cent of the fry-top surface was within plus or minus 50°F.

of the 450°F. thermostat setting. Eighty per cent of the surface was within plus or minus 25°F. of the setting and exploration for extreme temperature indicated a maximum variation in spot temperature of only 79°F.

With this arrangement, the time needed to heat the fry-top from room temperature to 450°F. was materially reduced. This high speed performance was obtained with only a negligible decrease in water heating efficiency when compared to the performance

obtained at less than half the input rating with contemporary burners.

Report No. 1284, the fourth issue under PAR Project IA-5, completes the series. Previous reports dealt with open top ranges (No. 1239), uniform heat top ranges (No. 1257) and center-fired hot top ranges (No. 1263).

Copies of Report No. 1284, authored by Richard A. Jacobson, may be obtained from A. G. A. or the Laboratories for \$1.50 each. Previous reports in this series are available at \$1 each.

Pipeline

(Continued from page 2)

per cent of total sales. Also included are several companies whose sales are nearly 100 per cent for resale, and several larger companies which, while they do not entirely meet the foregoing criteria, have the characteristics of pipeline companies."

The 91 companies surveyed operate 152,544 miles of pipelines, including 34,316 miles of company-owned gathering lines. Individual company mileages run as high as 9,898 miles. Pipe diameters vary from four to 36 inches, and operating pressures range from 200 to 1,200 pounds per square inch.

A. G. A. questionnaires were sent to all 91 companies, requesting details on the number of public injuries and fatalities and the dollar value of public property damage from 1940 through 1955, due to failures occurring during operations.

Only one of the companies canvassed by the subcommittee failed to report its safety records. Ninety of the companies answered the inquiry concerning public fatalities. Eighty-two filed complete reports for the entire 16-year period. One com-

pany and a subsidiary were unable to furnish data more than five years old, while two others and one subsidiary could not provide information on injuries or damage occurring prior to 1950. Four companies, while reporting that they were unable to offer detailed damage reports, stated that the costs of public property damages were so small that they were not recorded in detail at the time of occurrence.

Eighty-two companies reported property damages for the full 16-year period. Seven companies not reporting damages for the entire period were all subsidiaries of two major companies, while the remainder furnished reports only for a five-year period.

The statistics in this report underscore the fact that the public safety record of the nation's gas transmission companies is and has long been outstanding.

Due to the developments in recent years of modern high tensile strength steel pipe, and modern methods of construction, together with increasing attention to rigid tests, the use of x-rays and other safety measures in construction as embodied in the American Standards Association's Codes for pipeline construction, there seems to be no question but that the record in the future will be as good or better than in the past.

Acquires heater line

TEMCO, INC., Nashville, Tenn., has acquired the inventory, tools and dies for the manufacture of gas and oil space heaters from the Magic Chef Division of Food Giant Markets, Inc. These heaters were produced previously under the trade mark "Magic Chef."

Temco will continue this year to manufacture gas and oil room heaters under the "Magic Chef" trade mark. Subsequently, the line will be produced under the trade mark "Magic Chef—Wonder Warm," which also was acquired in the transaction.

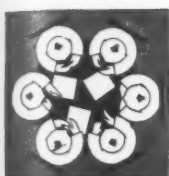
Temco has also obtained the entire service parts stock inventory, so that it can continue to supply parts for Magic Chef heaters now on the market. Temco will create a new department to handle the "Magic Chef—Wonder Warm" line, which will be marketed separately from the Temco line of gas heating equipment.

Arrangements have been made with Dixie Products, Inc., for the Magic Chef salesmen to continue to serve dealers this year.

Outdoor ads continue to boost gas sales



Algonquin Gas Transmission Co.'s new poster praises gas as a leader in home heating. Since the pipeline company started its outdoor advertising campaign in 1956, there has been a 50 per cent increase in gas consumption and a 65 per cent increase in gas heat users on the lines of its 18 New England gas utility customer companies. These 18 firms cooperate in the outdoor program, which runs continuously all-year-around throughout Massachusetts, Rhode Island and Connecticut.



Industrial relations round-table

Prepared by
A. G. A. Personnel Committee

Edited by **W. T. Simmons**

Assistant Personnel Manager
Philadelphia Electric Co.

● **Angels in the plant**—Workers see themselves as cooperative and non-aggressive. Evidence for this conclusion comes from a study by Dr. L. W. Porter, University of California. He received completed "adjective check-lists" from 463 managers and 320 workers from varied industries located throughout the nation. The checklist was made up of lists of paired adjectives. Respondents checked the adjectives which best described themselves (as they saw themselves).

The two groups differed significantly on about 40 per cent of the sets of questions asked. For example: Managers described themselves as . . . independent of thought and action . . . fair-minded . . . responsible . . . having high initiative. Workers saw themselves as . . . capable, not stubborn or outspoken . . . steady and reliable . . . agreeable, not quarrelsome or aggressive . . . even-tempered, with more control over their emotions than members of management.

What does this mean? It means that most employees like to think of themselves as a positive element in the company picture. It means that most employees have high ideals which can be appealed to. And, according to Dr. Porter's analysis, it means that they tend to identify themselves more with their role in the company than with their role as union or other worker group members.

● **Supervisors miss the point**—A recent *Newsweek* article carried the results of a survey comparing the way workers rate their job features with the way foremen think their workers feel about these features. The results are worth reviewing:

Job Features	Employee Rating	Foreman Rating
Appreciation for good work	1st	8th
Feeling "in" on things	2nd	10th
Help with personal problems	3rd	9th
Job security	4th	2nd
Good wages	5th	1st
Work that keeps you interested	6th	5th
Possibilities for promotion	7th	3rd
Personal loyalty to the workers	8th	6th
Good working conditions	9th	4th
Tactful discipline	10th	7th

What do your supervisors think?

● **Four ways to learn more from those working under you**—Charles H. Lang in the July issue of *American Business* states:

"I sometimes get the uncomfortable feeling that you people don't always tell me all I ought to know about what's going on out there in the plant." This man has not yet mastered the art of getting essential information in face-to-face interviews. Mr. Lang recommends these four rules to help in such situations:

- 1) Know precisely why you want to talk to an employee. It's difficult to write it down on paper in advance—but doing so will help you plan specific questions or comments.
- 2) Be sure to listen. Dr. Ronald Wilson of Management Consulting Associates estimates that interviewers usually do from 60 to 90 per cent of the talking. Keeping a 50-50 balance is recommended.
- 3) Look as you listen. The manner in which a person says something may contradict or emphasize what he says.
- 4) Avoid expressing your opinions on things you are still investigating. Consciously or unconsciously, the employee is eager to tell you what he thinks you want to hear.

● **Arbitration decision: Discharge of Utility worker for leaving job upheld by arbitrator**—Arbitrator Joseph Brandschain, declaring "there has been altogether too much irresponsibility by employees charged with public duty and too little regard for the rights of the public," upheld discharge of a public utility employee who walked off the job because he felt he must honor a strange union's picket line. This "abandonment of his duty" by the employee was "just or proper cause for discharge," Brandschain ruled.

The dischargee, an employee of Scranton-Spring Brook (Pa.) Water Service Co., was employed at the company's Wilkes-Barre plant as a gas maker's helper. He was a member of Local 406 of the Utility Workers Union of America. While at work one night last August, he discovered that pickets of a Federal Labor Union from Carbondale, 33 miles away, were parading around the Wilkes-Barre plant. Brandschain says they were there "to exert pressure upon the company at Wilkes-Barre to meet its (the FLU's) demands at Carbondale." When the employee discovered the pickets, he refused to work further, and walked off his job. The company fired him for this, and the union filed a grievance.

In arbitration, the company's position was that the work the employee was performing "was important to the manufacture of gas which is explosive and poisonous and that some 24,000 customers including private families, commercial and industrial concerns, schools and hospitals are dependent upon the maintenance of this service." Furthermore, the one-man walk-out was in violation of a no-strike clause in the company's contract with the Utility Workers, which forbids all manner of interference with work during the contract's term "so long as

the grievance procedure for which provisions are made herein is followed by the company."

The union did not deny that the employee walked off, but pointed out that he would not cross a picket line because he felt "a moral obligation and duty not to cross the picket line."

Brandschain thinks it clear that the employee "violated the agreement and his duty to his employer as well as his responsibility to the public that went with his job. There was no excusing what he did, except upon the ground that he misconceived the nature and priority of his allegiances. He apparently honestly thought that his duty as a union man to honor a picket line was the first consideration. He frankly concedes now that this was an error."

There was no dispute between the employee's union and his employer, and no dispute at the plant where the dischargee was employed. Brandschain says the employee's act was the result of his choice "between his duty to his employer and the company and his desire to help that union (the FLU) in its pressure against his employer." The arbitrator says he can understand how remaining at work after a picket line has been set up is the same thing to a union man as "passing a picket line," but he still concludes that abandoning the job was just or proper cause for discharge. While he may not agree fully with the theory that an employer may hand out discipline as he pleases where just cause exists, Brandschain says:

"I feel that employees in such essential jobs affected with a public interest should be made to feel that they have a real and compelling responsibility paramount if management is not permitted to enforce the discharge penalty in a case such as the present one. The discharge . . . is upheld. The grievance is denied."

● **If you punish, don't delay**—In punishing employees, not only must the punishment fit the crime, but it also must come quickly. No long waits, say arbitrators.

The case before Arbitrator George Bradley was unusual. The penalty was not imposed until five months after the event. The facts were: An oil refinery employee was caught flat on his back early one morning—sound asleep. He was reported to the superintendent. A decision was made—a five-day disciplinary layoff for this sleeping error. But the employee had gone on vacation. When he returned, the company was too busy to lay him off. He was told that he was to be penalized later. Five months later, the prediction materialized. The penalty was finally imposed. But it didn't stick. The arbitrator ruled that the company had no right to delay imposing the penalty.

There is no hard and fast rule about how long a delay will be countenanced.

*Connecticut Light and Power joined by
six other utilities in presenting Industrial Gas Show*

Shows boost industrial gas sales

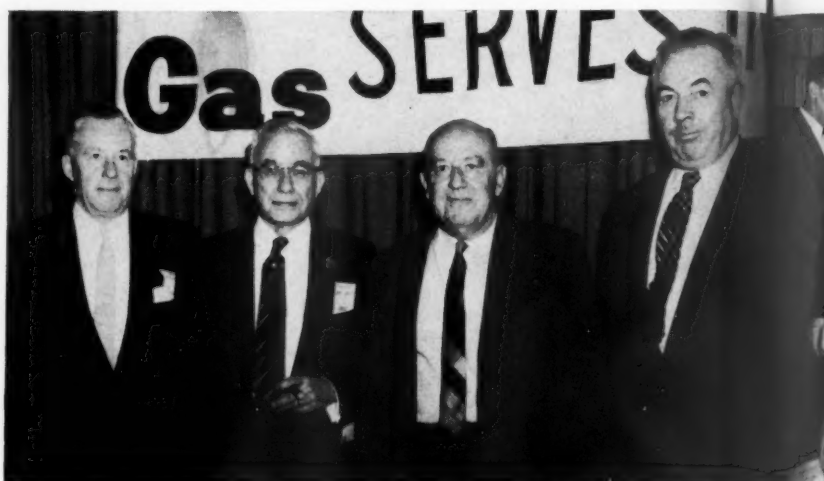
The 1958 Connecticut Industrial Gas Show, which was held Oct. 21-23 at the Waverly Inn, Cheshire, Conn., was a direct result of the successful industrial gas customer relations program conducted by The Connecticut Light and Power Co. during the past three years.

Four years ago, the company initiated a customer relations program which proved an immediate success. Since then, the company and its industrial customers have reached a state of rapport, and the company's industrial gas business has improved appreciably.

Each year for the past three years, the Connecticut utility has sponsored a dinner, several talks and a small-scale exhibition of specialized industrial gas equipment. These events, too, were held at the Waverly Inn, a restaurant which has for its customers' convenience a nearby two-story exhibition building. This building, which is amply supplied with gas, affords the opportunity of operating, as well as just displaying, various kinds of gas equipment.

In light of the successes of their past shows, Connecticut Light and Power this year undertook to expand the exhibition by enlisting the cooperation and participation of other major Connecticut utilities which have a large number of industrial gas customers.

The first day of the 1958 Connecticut Industrial Gas Show was sponsored by Connecticut Light and Power, which entertained some 150 of its industrial gas customers and a number of gas equipment manufacturers and related personnel.



Speakers at the 1958 Connecticut Gas Show included (l. to r.) C. S. Stackpole, A. G. A.; A. V. Bodine, The Bridgeport Gas Co.; William Krailing and John Kiernan, Bridgeport Brass Co.

Gilbert J. Williams, executive vice-president, Connecticut Light and Power, presided over the luncheon meeting on the first day.

Guest speaker was Fred H. Faulstich, vice-president, Springfield (Mass.) Gas Light Co., who developed further the "How Gas Builds A Greater America" theme which was introduced at the recent American Gas Association convention in Atlantic City.

Mr. Faulstich briefly traced the 142-year history of the gas industry—since the first street light was set ablaze in Baltimore in 1816—and gave due credit to all those who had contributed to the industry's progress, including producers,

transporters, local distributor utilities, and gas appliance manufacturers and distributors.

Mr. Faulstich stated that, so far in 1958, 32 million customers have used 100 million gas appliances. Of this total, he explained, "169,000 are industries such as yours, which use gas both as a fuel and as a raw material to produce vital chemical products. Because of its cleanliness, reliability and complete controllability," he added, "gas is widely used in processing and manufacturing steel, glass, ceramics, cement, textiles and countless other products." Mr. Faulstich also noted that "94 per cent of the gas customers in the United

States are supplied by investor-owned utilities."

After the luncheon—and after the remaining two days' luncheons—guests at the show visited the exhibits and consulted with company representatives. Each day was closed with a social hour.

Activities on the second day were sponsored by The Hartford Electric Light Co., The Hartford Gas Co. and New Britain Gas Light Co. Guests on the second day of the exhibition were the customers of these firms.

Wilson L. Highmore, division manager, Hartford Electric Light, presided at the luncheon, and introduced featured speaker Frederic O. Hess, president, Selas Corp. of America.

The subject of Mr. Hess' talk was "Pipe Dreams." In order to illustrate his contention that gas is here to stay, Mr.

continent, Mr. Hess said, adding that these systems are being designed to supply major industrial centers without undue consideration of national borders.

Mr. Hess also gave several examples of how gas is being used in this country in continuous processes which, together with other plant automation methods, permit increased production at lower costs.

The sponsoring companies on the third day of the exhibition were The Bridgeport Gas Co., The Housatonic Public Service Co. and New Haven Gas Co. More than 100 customers of these firms attended.

Alfred V. Bodine, president, The Bodine Corp., and a director of Bridgeport Gas, welcomed the guests to the luncheon and introduced the main speaker, Chester S. Stackpole, managing

dictions about the future: that gas will always be part of the economy, even after the supply of natural gas has been exhausted and everything has been extracted from oil shale; that atomic energy will not ruin the gas business, because the task of converting fossil fuel and oil shale into usable gas will require enormous amounts of energy and atomic energy can be used by the industry to bring about necessary reactions; and that solar energy, which will never be exhausted, is convertible into gas and will help to assure the industry of a marketable product for a long time to come.

W. A. Fitzsimmons, vice-president, New Haven Gas, concluded the third day's program with a brief talk.

Reactions to the three-day show among the industrial customers were



A. V. F. (l.), Springfield Gas Light Co., and G. J. Williams, Hartford Light & Power Co., inspect the industrial gas displays



Frederic O. Hess, Selas Corp. of America, told the delegates of the great future and numerous new applications open to the gas industry

Hess cited current events in England, where there has been a tremendous upsurge in gas activity of late.

Manufactured gas plants in England are being expanded, he said, and the industry is "planning exactly what has been done in the United States: namely, an extensive gas distribution system covering all major industrial towns and cities." Because of the lack of natural gas in the country, Mr. Hess explained, the English system will include pipelines interconnected with supply stations for coal gas, reformed oil gas, refinery gas, and methane in liquefied form.

Similar extensive pipeline systems are also being planned across the European

continent, A. G. A.

In a talk entitled "Gas—A Force for Progress in Industry," Mr. Stackpole traced the gas industry's place in the American economy. At the turn of the century, he said, gas provided only three per cent of the nation's energy requirements. By 1945, the industry supplied 13 per cent.

In 1958—when the industry is the fifth largest in the nation in terms of capital investment, customer growth, and revenue—the total has increased to just over 26 per cent. By 2,000 A.D., he added, it is predicted that the total will be 74 per cent.

Mr. Stackpole also made some pre-

dictions on several points: that it was a rare and worthwhile opportunity for a customer to meet and chat with an executive of a utility; that many problems were solved during informal talks; and that customer and supplier get to know and understand each other better.

Mr. Stackpole accurately summarized the feelings of those who attended the exhibition when he said that the opportunities for gas executives to meet with their industrial customers and to tell them the story of the gas industry are invaluable. There is absolutely no substitute, he concluded, for direct and informal contact in the quest for good customer relations.

Pope Pius lauded gas progress



The Vatican newspaper, "L'Osservatore Romano," reports on the talk by the late Pope Pius XII before the International Gas Union delegates

SOME 800 DELEGATES convened at the Seventh International Gas Conference of the Council of the International Gas Union Sept. 25 in Rome. The meeting, which spanned a four-day period, took place at the Palace of the Food and Agriculture Organization of the United Nations.

On Sept. 28, the final day of the conference, delegates were privileged to attend an audience at Castel Gandolfo and to hear a 17-minute address by the late Pope Pius XII.

Dott. Ing. Mario Boselli, retiring president of the union, presided over the conference. He was assisted by R. H. Touwaide, general secretary.

During the session, delegates elected Bengt M. Nilsson president. He will serve from 1958 to 1961. M. Touwaide was reappointed general secretary.

Business at the meeting included discussions of 46 papers and reports and the admission of two new members. The new groups are the gas section of the Technical and Scientific Society of the U. S. S. R. and the gas section of the Scientific Association of Engineers of Rumania.

In attendance at the convention were delegates from Austria, Belgium, Canada, Czechoslovakia, Denmark, France, Germany, Great Britain, Italy, the Netherlands, Spain, Sweden, Switzerland and the United States.

The United States representatives were:

Mr. and Mrs. R. E. Crawford, Minnesota Valley Natural Gas Co.; Mr. and Mrs. Wm. F. Crawford, Rockwell Manufacturing Co.; Mr. and Mrs. Hall M. Henry, NEGEA Service Corp.; Kenneth B. Lucas, Quebec Natural Gas Corp.; Mr. and Mrs. J. F. Merriam, Northern Natural Gas Co.; Mr. and Mrs. Curtis Morris, American Gas Association; A. G. A. President and Mrs. Robert W. Otto, Laclede Gas Co.; Mr. and Mrs. W. F. Rockwell, Jr., Rockwell Manufacturing Co.; Mr. and Mrs. Carl E. Schlegel, United Engineers and Constructors, Inc.; Mr. and Mrs. Frank C. Smith, Houston Natural Gas Corp.; Mr. and Mrs. E. H. Smoker, The United Gas Improvement Co.; A. G. A. Managing Director and Mrs. C. S. Stackpole; Virgil Stark, North American Utility and Construction Co.; and Mr. and Mrs. George S. Young, Columbia Gas System, Inc.

In his address to the delegates, the late spiritual leader of the Roman Catholic Church said:

"It is gratifying to see man working under God's guidance to organize the world, by exploiting the always renewing natural resources which he discovers in the immensity of the world. . . . An industry such as yours, born at the end of the 18th century, from experiments in the distillation of coal, has seen its techniques being improved slowly and its customers increasing progressively from all

over the world after nearly 150 years. Gas, formerly used exclusively for lighting, is now being applied to heating and other industrial purposes. But, in each one of these fields, competition from the oil and electrical industries has changed the markets and stimulated research. More recently, the exploitation of natural gas has constituted a challenge to the old gas industry, by making available a new source of fuel. Far from fighting this new competitor, the gas industry has made an ally of it, and you are studying with care the best means of satisfying the ever increasing demands of the consumers.

"Man is committed by nature to progress constantly. For him, to stop is to retrograde. He must march ahead, toward always renewing horizons. He is in search of the fundamental solution which will make all things one. . . . That is why the researches of the learned normally lead to the adoration of the One on Whom he depends in his most intimate being and Whose great masterpieces reveal 'eternal might and divinity.' May this essential truth illuminate and fortify your hearts in the midst of your daily works. May it also transform the work to your own eyes and give it its true value, because your duty in organizing the world is not to construct a definite earthly city, but to facilitate for yourself and your contemporaries the only search and discovery which counts: that of God."

*Past due balances increased 2.5 per cent
for residential accounts, and 0.4 per cent for all accounts*

U.S. Credit Picture analyzed

The nation's Credit Picture, now being reported twice a year, covers the period July 1957 through June 1958, and portrays trends not affected by seasonal conditions and monthly variations resulting from different practices by participating utilities.

Past due balances, as a per cent of sales, increased an average of 2.5 per cent for residential accounts and 0.4 per cent for all accounts during this 12-month period as compared to 1957.

The Credit Picture is a result of a survey of the credit and collection experiences of 76 utilities. The survey was conducted under the supervision of the Customer Collections Committees of the A. G. A. Accounting Section and Edison Electric Institute Accounting Division.

For the 12 months ended Dec. 31,

1957, the amount of past due residential accounts increased 6.7 per cent while the increase for all accounts was 3.1 per cent over the previous year. This indicates a leveling off in the uptrend for past due accounts. According to most business firms, the uptrend in their past due accounts also has leveled off and, in many cases, is currently declining. This is a reasonable expectancy inasmuch as any improvement in economic conditions should promptly be reflected in an improvement in past due accounts.

Because of the general uptrend in past due accounts that prevailed during the 12 months ended June 30, 1958, disconnect notices issued by all utilities increased 11 per cent over the previous year, and the number of nonpayment disconnections increased by 13.6 per

cent.

Several utilities have modified their practices with respect to requirements for security deposits as one means of lessening the exposure to further increases in write-off. The number of security deposits outstanding, as of June 30, 1958, increased 5.7 per cent and the amount of these deposits increased 10.2 per cent over the previous year. This increase in the number and amount of deposits is similar to the percentages reported for the 12 months ended Dec. 31, 1957, over the previous year.

Because of unemployment and/or customers moving from one area to another, there was a continued increase in the number of off-service final bills. During the year ended June 30, 1958, the number of final bills increased by

TREND SUMMARY OF THE CREDIT AND COLLECTION EXPERIENCE OF THE UNITED STATES GAS AND ELECTRIC UTILITIES FOR THE 12-MONTH PERIOD ENDED JUNE 30, 1958

(PER CENT INCREASE OR DECREASE OVER THE 12-MONTH PERIOD ENDED JUNE 30, 1957)

	East North Central	East South Central	Middle Atlantic	Mountain	New England	Pacific	South Atlantic	West North Central	West South Central	United States
SALES (dollars)	+ 6.1	+10.5	+ 5.7	+ 7.5	+ 5.3	+10.9	+12.0	+ 6.5	+ 8.5	+ 7.7
CUSTOMERS	+ 1.8	+ 3.0	+ 0.9	+ 3.7	+ 1.1	+ 3.0	+ 2.2	+ 2.2	+ 2.1	+ 1.9
OUTSTANDING IN DOLLARS	+ 8.1	+28.3	+12.7	+ 9.8	+ 0.1	+ 2.7	+14.2	- 1.8	+ 4.6	+ 7.5
OUTSTANDING PER CENT OF SALES	+ 1.7	+14.9	+ 6.5	+ 2.1	- 5.0	- 4.9	+ 1.2	- 6.4	- 3.6	+ 0.4
DISCONNECT NOTICES	+17.1	+ 3.5	- 1.0	+20.8	+11.4	+20.1	+17.8	+ 7.6	+ 7.9	+11.0
NON-PAYMENT DISCONNECTIONS	+17.8	+13.6	- 2.9	+40.8	+28.5	+28.5	+19.4	+ 4.6	+12.5	+13.6
DEPOSITS ON HAND (number)	+ 8.3	+ 1.2	+11.2	+ 5.9	+ 6.2	+ 7.3	+ 7.5	+12.6	- 3.9	+ 5.7
DEPOSITS ON HAND (dollars)	+13.6	+ 2.8	+13.7	+ 8.6	+10.3	+34.4	+ 7.1	+ 7.9	+ 0.3	+10.2
FINAL BILLS (number)	+ 6.4	+ 2.0	- 3.3	+24.0	+ 3.4	+ 2.4	+11.9	+ 1.8	+ 6.3	+ 3.9
ACCOUNTS CHARGED OFF (number)	+ 6.7	+23.1	- 1.8	+10.7	- 0.1	+14.3	+ 6.8	+ 2.9	+15.2	+ 7.7
NET CHARGE-OFF (dollars)	+16.5	+30.4	- 0.8	+42.4	+ 7.8	+25.5	+18.0	+10.1	+45.4	+16.2
NET CHARGE-OFF (cents per customer)	+14.4	+26.6	- 1.6	+37.3	+ 6.7	+21.9	+15.6	+ 7.7	+42.4	+14.0
RATIO-NET CHARGE-OFF TO SALES	+10.5	+16.7	- 5.3	+35.0	+ 3.6	+15.4	+ 4.2	0.0	+25.0	+ 4.8

3.9 per cent, while the number charged off increased 20.1 per cent. Moreover, the amount of final bills issued increased 7.7 per cent, while the amount of net charge-off increased 16.2 per cent.

These ratios indicate that a higher proportion of the number of final bills issued proved to be uncollectible, and that there was an increase in the average amount per final bill written off. This was reflected in the increase of 14 per cent in the charge-off as cents per customer served.

Net charge-off, as a per cent of sales, is the index preferred by many utilities for evaluating the trend of charge-off. Because most of the charge-off generally is represented by residential accounts, it is especially significant to consider net charge-off as a per cent of residential sales, as well as a per cent of total sales. This is illustrated by the above table.

According to most firms, a decline in the uptrend of write-off, cannot generally be expected until a few months

RATIO OF NET CHARGE-OFF TO SALES, AND PER CENT INCREASE

Utilities	To Residential Sales			To Total Sales		
	June 30, 1958	June 30, 1957	Per Cent Increase	June 30, 1958	June 30, 1957	Per Cent Increase
21 Gas	0.45	0.45	0.0	0.32	0.32	0.0
31 Electric	0.56	0.51	9.8	0.21	0.19	15.7
24 Combination	0.42	0.40	5.0	0.19	0.18	5.6
All Companies	0.47	0.45	4.4	0.22	0.21	4.8

following a sustained improvement in business and economic conditions. Whether or not this will be the experience of utilities may be reflected in future Credit Picture reports.

The current Credit Picture is the second report issued during 1958. However, data covers 12-month periods ended June 30, 1958, and the entire year of 1957, rather than six-month periods as formerly reported. It portrays trends that are not affected by seasonal conditions and monthly variations resulting from different practices by participating utilities.

Collection results experiences by most

business firms and utilities are influenced by business and economic conditions. These factors include unemployment, business failures, population shifts, FRB Index of Industrial Production, and others. For example, consumer credit outstanding and the extent to which customers are burdened with monthly installment payments affect the trend of past due accounts.

During recent months, the negative aspect of these factors has been more pronounced in some geographic areas than in others, resulting in a corresponding effect on collection results experienced by most companies in these areas.

14 A.G.A. member companies win awards for annual reports

SIX MEMBER COMPANIES of the American Gas Association have been awarded bronze Oscars in the 18th annual survey of corporate annual reports conducted by *Financial World*, national weekly magazine. In addition, eight other member firms have received second and third place awards.

Some 5,000 reports were entered in the competition. From this number, 1,907 were presented with merit award certificates. The Oscar winners and runners-up in the various industrial categories were selected from among the certificate recipients.

In the "gas products" category, which was divided into two sections, consolidated Natural Gas Co., New York, won the bronze Oscar in the "\$75 million and over assets" section. Lone Star Gas Co. and Laclede Gas Co. placed second and third, respectively, in this section. In the "under \$75 million assets" group, Northwest Natural Gas Co. (formerly Portland Gas & Coke Co.) received the Oscar. North Shore Gas Co., Illinois, and Minneapolis Gas Co. placed second and third, respectively.

Panhandle Eastern Pipe Line Co. merited the Oscar in the "pipelines" category. Northern Natural Gas Co. took second place.

In the "public utilities" group, Virginia Electric & Power Co. won the Oscar in the

"operating electric—\$60 million and over revenue" section. Consumers Power Co. received the third place award in the same section.

In the post-meeting reports section of the competition, Middle South Utilities, Inc., won the Oscar in the "public utilities" category. United Gas Corp. took third place in this category.

The Columbia Gas System, Inc., won the Oscar in the "public utilities" group in the security analyst yearbooks section of the survey. Washington Gas Light Co. placed third in this category.

W. M. Day wins car at A. G. A. convention



William M. Day (center), vice-president and director of engineering for Bryant Manufacturing Co., Indianapolis, Ind., accepts the keys to the 1959 DeSoto which he won as a door prize at the Atlantic City convention of the American Gas Association. Ted Everroade (left), sales manager for Jones & Moley, Inc., makes the presentation to Mr. Day on behalf of A. G. A., as Nick Scollard, general manager of the DeSoto-Plymouth sales office in Atlantic City, looks on.

Fuel costs discussed

FORD, BACON & DAVIS, Inc., Engineers, has prepared an eight-page report, entitled "How Important Are Fuel Costs in Natural Gas Compressor Drivers?" Copies of the study are available, free of charge, from Ford, Bacon & Davis, Inc., 39 Broadway, New York 6, N. Y.

*U. S. Supreme Court has ruled gas utilities
are entitled to compensation when facilities must be relocated*

Payment due in public way change

By JOHN F. MORIARTY

*Legal Counsel
City of Holyoke Gas and
Electric Department
Holyoke, Mass.*

The subject of "Rights of Gas Utilities in the Public Way" includes such topics as the right of a gas company to use the public ways in the face of local opposition, the validity or invalidity of local regulations, and the taxation of pipeline facilities. The problem considered here involves the relocation of gas facilities installed in a public way.

When facilities originally installed on gas company land or on rights of way obtained by the gas company over private lands must be relocated to make way for a highway, the company is entitled to fair compensation.

The U. S. Supreme Court has ruled that an attempt to deprive a company of compensation under such conditions is a deprivation of due process of law and therefore unconstitutional.

However, the situation may be quite different when the relocation is of facilities originally located in a public way. The almost universal rule of the common law is that utility companies are bound to relocate their facilities in the

public ways when such relocation is required for highway improvement, and are bound to do so at their own expense.

The common law rule is that the rights of the utility in the public way are not actually rights at all, but are rather mere privileges or licenses subservient to the general purpose of public travel and must yield to that purpose.

In the absence of an enabling statute, a state cannot contract with a public utility to pay the company the costs of removing its facilities from the public way, and an attempted contract to that effect is invalid.

The basic rule is that, when required by the exigencies of travel, a public utility must relocate its facilities in the public ways at its own expense.

Within the past decade, there have been two major developments which must be considered. They are:

1. Relocation of utility facilities to make way for revenue producing projects such as toll highways, toll bridges, and toll tunnels.
2. Relocation of utility facilities to make way for federal aid highways.

In the past decade there has been a trend toward recognition of a distinction between cases where a utility is forced to relocate its facilities for ordinary highway improvement or reconstruction, and where such relocation is required

for a new revenue producing project.

The tendency has been to recognize the fact that toll highways are designed for the benefit of travelers who use them, that they confer no benefit upon the utilities, and that any costs incurred in their construction should be reflected in the rates of their users rather than in the rates of utility consumers.

In a recent decision involving the relocation of utility facilities for a toll bridge being constructed across the Delaware River, the Superior Court of Pennsylvania used the following language:

"... The bond issue will be self-liquidating from tolls collected from those who use it (the bridge) in vehicular traffic between the two states. For this reason, the bridge toll payers and not the electric company should bear the costs of relocating the facilities made necessary by the construction of the bridge."

When read out of context, this language would appear to be authority for the proposition that the mere fact that a project is revenue producing is sufficient to require payment by the constructing authority of all utility relocation costs necessitated by the project. In fact, however, even the Pennsylvania Superior Court has not gone quite that far.

In a later decision the court said, in

(Excerpts from a paper presented by Mr. Moriarty on Oct. 30 before the Operating Division of the New England Gas Association.)

the case of revenue producing projects, some statutory authority is required to enable a state to pay the costs of relocating utility facilities from public ways.

The Delaware Port Authority Case was decided under a statute which authorized the Public Utility Commission to apportion "expense of construction." The court decided that the expense of relocating utility facilities from public ways was one of the "expenses of construction" intended by the legislature to be apportioned, and that the commission could therefore properly apportion that expense to the bridge authority.

In a decision issued Sept. 29, 1958, the Supreme Court of Pennsylvania overruled the decision of the superior court, ruling that while the legislature could provide that utilities be reimbursed for their costs in relocating their facilities, a clear manifestation of legislative intent was required.

In a relatively early New York decision, it was held that the mere circumstance that tolls are to be charged to finance an improvement does not relieve a utility of the obligations of relocating its facilities from the public ways at its own expense, and that a utility could be relieved of such costs only by clear legislative authority.

This same rule has been declared to be the law of Maine in a decision by the Supreme Judicial Court of that state involving the Maine Turnpike Authority. The court held that the term "cost of the turnpike," as used in the enabling act, had not been intended to include the cost of utility relocations.

In a recent Maryland decision, while the court recognized that some statutory authority was necessary in order to reimburse relocation costs to a utility, it construed the following language as supplying such authority:

"All private property damaged or destroyed in carrying out the powers granted by this subtitle shall be restored or repaired and placed in its original condition as nearly as practicable or adequate compensation made therefor. . . ."

The Maryland decision is of particular significance to Massachusetts utilities, because precisely the same language is contained in the Massachusetts Turnpike Authority Act.

The Supreme Judicial Court of Massachusetts has never had occasion to determine whether or not the language of the act requires or authorizes the pay-

ment of these costs.

The Act itself does not expressly authorize such payments, and the most recent amendment which authorizes the taking of land for the purpose of utility relocation and the leasing of such land or easements therein to utilities, does not expressly state that other costs associated with utility relocation shall be paid by the Authority.

However, as a matter of practice, the Massachusetts Turnpike Authority has paid utility relocation costs whether the relocation was from public ways or private rights of way. The Authority has already expended some \$4 million for this purpose, and to my knowledge such payments have never been challenged.

The practice of the Massachusetts Turnpike Authority is of particular importance in view of the fact that the turnpike will soon be extended into Boston, and because it seems probable that still further revenue producing projects will be placed within the jurisdiction of that Authority.

In addition to the language construed in the Maryland Case, the Massachusetts Act also provides that "damages incurred" in changing the grades of public highways or in relocating public highways shall be paid by the Turnpike Authority as part of the cost of the turnpike. However, the act does not expressly state that utility relocation costs should be considered as part of such damage.

In a later Massachusetts statute, the Massachusetts Port Authority was authorized to pay utility relocation costs. The statute is peculiar in that it authorizes such payments when the work is done by the utility and requires the utility to pay such costs if it refuses to do the work or if the work is done by the Authority.

It might be argued that since the Port Authority Act expressly provided for the payment of these costs, and since there was no such express provision in the Turnpike Act, the legislature did not intend such costs should be borne by the Turnpike Authority. However, it should be noted that a similar argument was urged in the Maryland Case and did not prevail.

In summary, it might be said with regard to revenue producing projects:

1. That there is a tendency on the part of legislatures, courts and administrative agencies to recognize the principle that costs of relocating utility facilities to make way for such projects,

whether from public or private ways, should in fairness and equity be borne by the project and not by the utility.

2. That whatever the equities may be, it is still necessary that the legislature authorize such payments by statute.

3. That the courts have gone to varying lengths in finding implied authorization in enabling acts.

Under such circumstances it would seem advisable for utilities to urge that legislation authorizing revenue producing projects contain express authority for the payment of utility relocation costs.

There is one limitation on statutory authorization that should be kept in mind: Once a project has been authorized with no provision for such payments, and once bonds have been issued in pursuance of that project, an attempt to authorize payment of utility relocation costs at a later date is likely to be held unconstitutional and void as an impairment of a contract between the Authority and the bondholders.

The theory is that the imposition of such costs on the Authority constitutes an additional burden on the bondholders which was not contemplated when the bonds were originally purchased.

For this reason an attempt by the Maine legislature to require the payment of such costs by the Maine Turnpike Authority was stricken down as unconstitutional.

It is important that the utilities urge the inclusion of relocation cost provisions in enabling acts when they are first passed, since it may be impossible to include such provisions at a later date.

The second development considered here is the development with regard to federal aid highways.

On May 1, 1946, the Federal Public Roads Administration issued its general administrative memorandum No. 300, which provided that the federal government would reimburse states for payments which the states were obligated to make for utility relocations on public ways on a pro rata basis.

The policy established by that memorandum appears to have had little effect upon the laws of the various states, probably because the federal contribution amounted to only 50 per cent of the actual costs.

On June 29, 1956, Congress passed the Federal Highway Act of 1956. This provided for a federal contribution of 90 per cent of the costs incurred in con-

(Continued on page 25)

Although thousands visited exhibits, Metal Exposition reports less buying this year than in past

Spotlight on Hotel, Metal Shows

15 manufacturers enter A.G.A. commercial exhibit

Fifteen cooperating manufacturers, who participated in the American Gas Association Combined Commercial Gas Exhibit, displayed the most modern in heavy duty cooking appliances and allied equipment at the 43rd National Hotel Exposition Nov. 3-7 at the New York Coliseum.

Thousands of visitors passed under the Blue Flame banner to view the exhibits and to talk with manufacturers representatives and gas company commercial personnel.

The G. S. Blodgett Co., Burlington, Vt., showed its standard deck and pizza ovens, and the new 12-inch-high Speedette roasting and baking oven, which has a 20-inch-square deck and is suitable for counter work.

Cecilware-Commodore Products Corp., New York, displayed its full line of coffee urns, portable hot food containers, and the combination grille and broiler counter unit.

Char-Rock Products, Indianapolis, exhibited a large-capacity upright broiler, the regular restaurant broiler, and a small broiler suitable for residential outdoor cooking.

Both Steam Chef and Steamcraft pressure cookers were featured in the booth of the Cleveland Range Co., Cleveland. These cookers can either generate their own steam or be connected to building steam.

Cribben & Sexton Co., Chicago, dis-



Visitors watch Magic Gas Ray's infra-red broiler in operation at the National Hotel Exposition. This commercial broiler is an application of the Schwank burner

played the Magic Chef equipment line. Included were a restaurant-type range with both fryer and broiler, a deep fat fryer, a deck oven, and several heavy duty ranges with various tops.

Duke Manufacturing Co., St. Louis, showed both stationary and portable food warming equipment.

A new steam-jacketed kettle, which uses only 25 psi steam pressure, was exhibited by B. H. Hubbert & Sons, Inc., Baltimore. In addition, the company showed a group of counter model kettles.

A new pot and pan unit which, when mounted on any sink, converts the sink to a pot and pan washer, was displayed

by Kewanee Industrial Washer Co., Kewanee, Ill.

Magic Ray, Inc., Cleveland, a firm new to the field of gas, showed a broiler which uses infra-red heat in order to seal in food juices, and is equipped with two Schwank burners set at an angle facing each other.

Several heavy duty appliances, including broilers, ranges with various tops, a deep fat fryer, and a restaurant-type range with both griddle and broiler, were exhibited by Malleable Steel Range Manufacturing Co., South Bend, Ind.

The Martin Oven Co., Inc., Rochester, N. Y., showed its roasting and baking



Two exhibits in the gas section of the Metal Show were the muffle furnace of Charles A. Hones, Inc., and the brazing table of Gas Appliance Service, Inc.



Guests at the Industrial Gas Breakfast during the Metal Show included (l. to r.) John S. McElwain, J. M. Smith, Dr. John H. Hollamon and F. Thompson Brooks



Delegates stop to look at the display of space heating and industrial processing applications of the Schwank infra-red burner during the Cleveland Metal Show

deck oven.

Middleby-Marshall Oven Co., Chicago, displayed a seven-pan reel oven designed for roasting and baking a variety of foods simultaneously.

Controls for all types of commercial cooking equipment and auxiliary appliances were shown by Robertshaw-Fulton Controls Co., Youngwood, Pa.

New commercial equipment in the booth of A. O. Smith Corp., Kanakee, Ill., included a 70-gallon glass-lined water heater and a 30-gallon water heater with a 50,000-Btu input.

Both A. G. A. and the Gas Consumers Association maintained lounge areas throughout the week-long exhibition. A. G. A.'s lounge was used by the cooperating exhibitors and gas companies for consultations with customers. The Gas Consumers Association's personnel lounge was staffed with people who gave advice to visitors on servicing problems.

410 exhibits displayed at National Metal Exposition

The 40th National Metal Exposition and Congress held during the week of Oct. 27 in Cleveland was visited by some 60,000 delegates. Said to be the world's largest industrial exposition, the event, which is sponsored by the American Society for Metals, featured 410 exhibits. The show's Combined Industrial Gas Exhibit boasted the participation of seven cooperating manufacturers of industrial gas equipment.

Although the booths were crowded throughout the week, exhibitors reported less buying interest this year than there has been in previous years, and called this buying lethargy a reflection of general conditions in the country.

The gas exhibit was situated on a main aisle, a location more central, and more satisfactory to the exhibitors, than those of past years.

American Gas Furnace Co., Elizabeth, N. J., displayed a full muffle shaker hearth furnace for continuous heat treatment of stainless steel in a dry hydrogen atmosphere. The company also presented an exhibit of many of its pattern flame burners, in order to show how accurately gas flames can be directed at a particular operation.

Gas Appliance Service, Inc., Chicago, showed a forge furnace, a pot furnace,

and an air heater. In addition, a revolving brazing table, in full operation, demonstrated gas brazing of a thermostat part.

"Buzzer" furnaces were exhibited by Charles A. Hones, Inc., Baldwin, N. Y. This display included a full muffle furnace capable of attaining 2,300°F., a pot hardening furnace, and the full line of burners.

The C. M. Kemp Manufacturing Co., Baltimore, showed a stereotype metal melting pot with immersion tube firing and an inert gas generator.

Perfection Industries division of Hupp Corp., Cleveland, shared a space with John J. Fannon Products Co., Detroit. Perfection demonstrated the Schwank burner in space heating applications, while Fannon illustrated industrial applications of the Schwank burner. Much interest was shown in the infrared emission for industrial processing and drying operations, in which time consumed can be substantially reduced over other methods.

The Selas Corp. of America, Dresher, Pa., operated both a bell-type furnace, and several display burners which ran on a sheet of plastic with apparently no gas connection. There was also a working model of the firm's duradant continuous heat processing method.

The Spencer Turbine Co., Hartford, showed the blowers which are used for premixing gas, and a pneumatic conveyor system.

A highlight of the exposition was the 22nd annual Industrial Gas Breakfast held Oct. 29. This event was attended by some 100 industrial gas engineers, equipment manufacturers, and representatives of publications in the metal working field.

Delegates at the breakfast were welcomed by John S. McElwain, general sales manager, The East Ohio Gas Co., who presented a brief picture of the company's operations and said that one-third of East Ohio's send-out is distributed to industry.

Mr. McElwain also paid tribute to Allen Thurston, an East Ohio gas engineer who has just retired. Mr. Thurston has been active for many years on American Gas Association committees.

Another greeting was extended to delegates by Dr. John H. Hollomon, General Electric Research Laboratory, Schenectady, N. Y., and trustee of the American Society for Metals. Dr. Hollomon noted the Society's three projects for this year: expansion of services to



Guests at the Commercial Gas Breakfast during the National Hotel Exposition included (l. to r.) C. S. Stackpole, J. A. McCarthy, H. L. Whitelaw and T. B. Madole



Other head table guests at the Commercial Gas Breakfast were (l. to r.) Harold Massey, Donald Greenaway (who was the featured speaker) and F. Thompson Brooks



Conferring during the annual Commercial Gas Breakfast were (l. to r.) Professor O. Ernest Bangs, Donald Greenaway, John Pope and Professor Howard B. Meek

industry, completion of the new headquarters building, and securing of a successor to the late Bill Eisenman.

Guest speaker at the breakfast was J. M. Smith, manager, automotive engine section, Aluminum Co. of America, Cleveland. In a discussion of the use of aluminum in the field of passenger cars, he said that aluminum has become the second most popular metal in this area in the space of only 70 years.

The use of aluminum on automobiles is increasing each year, Mr. Smith said. In 1950, he stated, about 10 pounds were used per car; in 1958, more than 50 pounds were used; in 1959, each new car will have an additional four pounds.

Mr. Smith said that a crash program to introduce an all-aluminum engine was presently underway. He did not, however, attempt to guess when such a machine might become a standard automobile part. As advantages of aluminum in cars, Mr. Smith listed a lower cost per finished part, particularly in trim and hardware; weight reduction and a better distribution of weight for easier steering; better roadability; and reduced tire wear.

In a reference to the method of production of an aluminum engine block, Mr. Smith suggested such manufacturing processes as die casting, permanent mold, and sand casting. About 200 pounds of metal would be involved in

such a product, he said. If and when the industry switched from iron to aluminum, he concluded, gas would still be required in the manufacturing process.

Traditional Commercial Gas Breakfast held Nov. 5

About 100 commercial gas men, equipment manufacturers and representatives of publications in the volume feeding field attended the American Gas Association's 11th annual Commercial Gas Breakfast Nov. 5 in New York City. The breakfast is a traditional Wednesday affair during National Hotel Exposition week.

Guest speaker at the breakfast was Donald Greenaway, assistant executive vice-president, National Restaurant Association. Mr. Greenaway outlined briefly the scope and organization of the 9,000-member N.R.A. and explained how the criticisms, suggestions and desires of the entire membership eventually come to the attention of a mere seven people at Association headquarters in Chicago.

Commenting on both the national political situation and various government policies regarding small businesses, a great number of which are restaurants, Mr. Greenaway noted that the trend toward an upward extension of the mini-

mum wage laws would have a pronounced effect on volume feeding.

Mr. Greenaway pointed out that the biggest problem of restaurants was rising costs, particularly for labor. Emphasizing that productivity must be increased, he suggested that replacement of obsolete, costly-to-operate appliances with improved, highly mechanized equipment was one method of achieving this increase.

Midwest Industrial Gas Council hears 4 speakers

SOME 125 members attended the annual fall meeting of the Midwest Industrial Gas Council Oct. 24 in Chicago. Grover C. Lewis, Northern Illinois Gas Co., chairman, presided. A. J. Van Hoef, Michigan Consolidated Gas Co., vice-chairman, arranged the program, which included four speakers.

Herman Schneider, application engineer, Wheelco Instruments Division, Barber-Colman Co., Rockford, Ill., discussed "Combustion Safeguard Applications." He said the trend toward use of larger volumes of gas had created a pressing need for better and more accurate controls.

After reviewing the fundamental equipment on small installations, described as slow-acting, Mr. Schneider pointed out that the new controls which respond instantaneously are the ones which should be used. The new electronic safeguards, he noted, have the required fast response for higher inputs.

"Modern Gas Burner Equipment and New Applications" was the subject of a talk by William H. Oler, vice-president, engineering division, Hauck Manufacturing Co., Brooklyn. He gave a brief summary of the many types of burners made by his company and described the applications for which each unit was designed.

Mr. Oler said that manufacturers of burners must be alert to the demands of customers, particularly when new manufacturing methods are developed. Because his company tries to fulfill all present-day needs, he said, new burners—such as the high thermal release burner—are constantly coming out of research projects.

William R. Van Ittersum, sales manager, John J. Fannon Products Co., Detroit, spoke of his company's progress so far in promoting the application of the Schwank infrared burner in industrial processing operations.

E. W. Mautner, vice-president, Midwesco, Inc., presented a talk on "Boiler Conversion Applications." Using Chicago's Merchandise Mart, with its large battery of boilers, as an example, he described many phases of conversion.

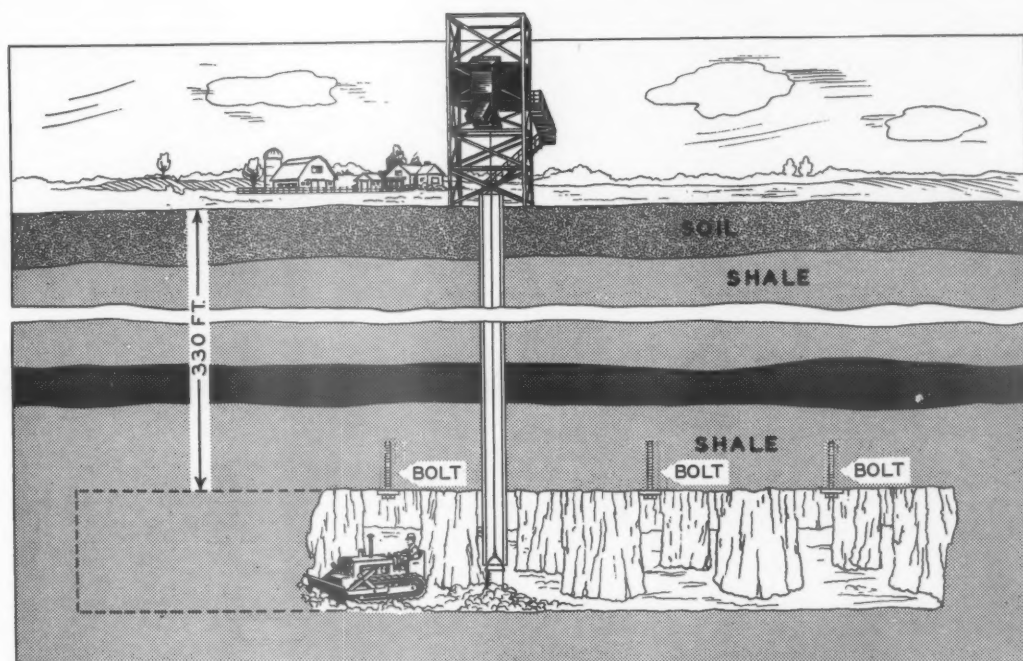
Originally, Mr. Mautner explained, all of the boilers worked on solid fuel. There was a gradual change, however, to liquid and gas fuel with combination burners. The entire group of boilers is now on interruptible gas with oil standby, he said, with the exception of one boiler which is retained as a coal standby, in case there is a shortage of the other fuels.

Presidents open valve to new gas pipeline



Ernest S. Fields (l.), president, Cincinnati Gas & Electric Co., and John W. Partridge, president, Kentucky Gas Transmission Corp., turn the valve that opens a new natural gas pipeline that will bring additional deliveries of 32,800,000 cubic feet daily to Cincinnati Gas customers

Bulldozer goes into 42-inch hole



This artist's conception of Cincinnati Gas & Electric Co.'s 9,300,000-gallon-capacity propane gas cavern shows the pillars and bolts which will support the ceilings and separate the 40 rooms of the well

A 7,000-pound bulldozer rumbled across an open field just south of Middletown, Ohio, and lurched to a halt in front of a piece of steel tubing 42 inches in diameter. A curious onlooker stepped forward.

"What are you doing?" he asked the bulldozer operator.

"I've got to figure out how to put this bulldozer through that piece of tubing," the operator replied.

"Who are you kidding?" the first man scoffed. But the operator wasn't kidding. Actually the ponderous machine will have to be lowered some 300 feet straight down into the earth—through the 42-inch tubing, or casing.

It is an important part of "Operation Todhunter," which will transform the field into a fantastic catacomb, or cavern. Liquid propane gas shipped through the Little Inch Line from Texas will be

stored there.

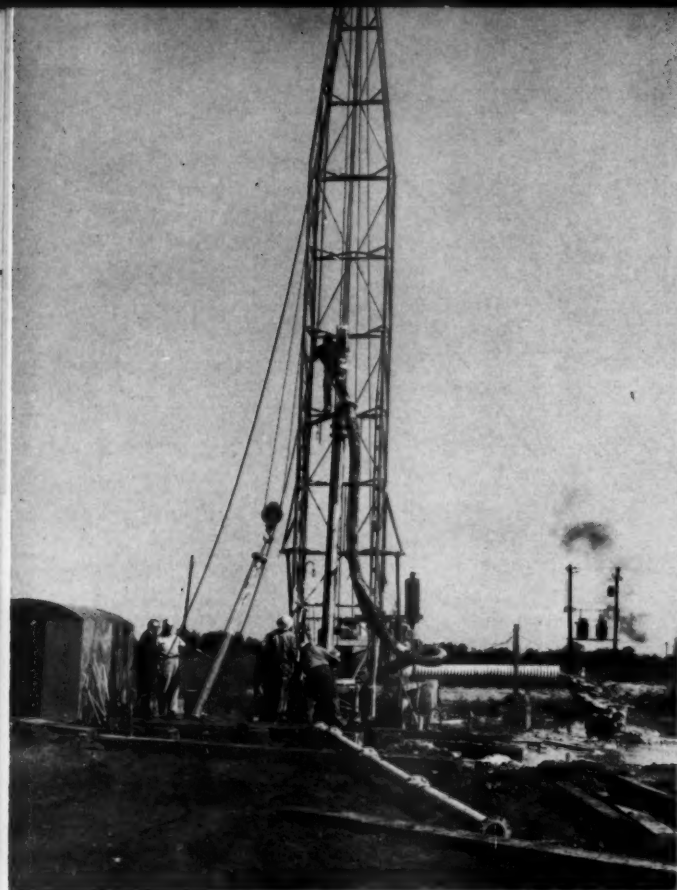
The Cincinnati Gas & Electric Co. is spending nearly \$2,000,000 on construction of the cavern and an adjoining processing plant to help bolster its gas supply in near-zero weather. As much as 50,000,000 cubic feet of gas per day will be provided.

Engineers have found that the shale and limestone formation under the Todhunter Road farmland is ideally suited for use as natural underground storage tanks for the propane gas. They also believe that the type of storage is safer and cheaper than the above-ground metal storage tanks. The first step in this unique project already has been completed. The 42-inch casing, three-fourths of an inch thick, has been sunk 300 feet and sealed in place with 1,150 sacks of cement.

The deep hole was drilled in stages. A

four-inch hole was increased to an eight-inch hole and the drilling operation was expanded gradually, through use of special drilling machinery, until the shaft was large enough to permit lowering of the casing. The hole was pumped dry before the casing was sealed in concrete.

With the casing in place, the tunnel miners are ready to begin work of digging the cavern. It will have a capacity of 9.3 million gallons. The first mining operation will require two miners to descend the 300 feet down the casing inside a barrel-sized steel bucket. They will take a pick and drill with them to burrow two holes big enough for setting the first charge of explosive—about 10 pounds. Then they will be pulled back to the surface, from where the dynamite charge will be set off. After the blast, they will return to the base of the shaft



Vent hole is drilled (far left) into cavern; bulldozer (above) awaits dismantling, in order to be moved into cavern piece by piece; barrel (left) will be elevator for both men and loads of unearthed shale and limestone

and begin the laborious job of hand shoveling the shale and limestone loosened by the blast.

When that has been brought to the surface in the same bucket in which they were lowered, they will drill more holes and set off another dynamite charge. As the hole becomes enlarged, other miners will join them. The work, according to S. E. Scisson, president of Fenix & Scisson, Inc., Tulsa, Okla., cavern mining specialists, will start from the ceiling of the cavern and work downward. The first tunnel will be eight feet high and six feet wide.

About six weeks of hand drilling and shoveling will be required before the bulldozer can be lowered through the 42-inch casing to speed up the work. This will be accomplished by disassembling the entire machine and lowering it in the bucket into the tunnel, where it will be reassembled.

A 6,000-pound air-operated rocker shovel, or loader, which will operate on a track in the cavern, also will be disassembled and lowered piece by piece in the bucket into the cavern. The bucket will have to make 150,000 lifts

of shale and limestone to give the cavern its 150,000-barrel or 9,300,000-gallon capacity.

The cavern will be dug in the form of "rooms"—40 in all—about 25 feet high and 25 feet wide. Partial "walls" will be left standing for support. No other shoring will be necessary, except that expansion bolts, about six feet long and one inch in diameter, will be driven into the ceiling to compress the various layers of shale and limestone formation.

When the underground excavation is completed, the bulldozer and rocker shovel again will be disassembled and brought to the surface, piece by piece.

A cap then will be welded on the casing shaft and the cavern will be tested to withstand 200 pounds of pressure.

Milton J. Pfeiffer, Cincinnati Gas & Electric Co. vice-president in charge of gas, and William Robinson, manager of CG&E's northern division, say that the propane will be pumped as a liquid from the cavern to the processing plant, which will be built one mile east of the cavern. There it will be gasified, mixed with natural gas from the Big Inch Line, and put into the company's service lines.

The cavern and plant are expected to be in operation by August 1959. After the cavern is placed in service it may never again be opened for inspection or repairs.

Cincinnati Gas & Electric Co. long has been one of the few gas companies in the nation that has maintained a propane gas plant and a carbureted water gas plant that goes into action to bolster the supply when the temperature nears the zero mark. Propane is stored at the plants in 15 heavy metal outdoor storage tanks, holding 400,000 gallons of propane.

Todhunter Station capacity will be more than 20 times that of the present plants.

"The new facility will do much to improve service in our entire area in the bitter cold weather," Mr. Pfeiffer said.

While the Middletown, Ohio, cavern will be the first in this area, similar caverns have been in use in other parts of the country since 1949. Ten have been completed and 10 others are in the process of construction, Mr. Pfeiffer said.

"They have proved safe and economical," he asserted.

Payment due

(Continued from page 22)

struction of highways on the interstate system, and provided for reimbursement of costs of utility relocations paid by the states in all cases where such payment did not violate the laws of the state or a legal contract between the utility and the state.

Thus, the policy established by administrative interpretation was elevated to the dignity of an Act of Congress.

In view of the far-reaching effects of the 1956 Act, there was justification for establishing such Congressional policy.

The passage of the Act resulted in a rash of state legislation designed to take advantage of its provisions by either authorizing or requiring the state to pay the costs of utility relocation on projects connected with the interstate or other federal aid highway programs.

During 1956-57, legislation of this type was considered by the legislatures of 40 states, and was enacted into law in 16 states.

The legislation was opposed by automobile clubs and others who were interested in obtaining the largest possible fund for actual highway construction. Such legislation also has had to overcome constitutional objections.

It seems likely that within the next few years many other states will follow the trends, and it is apparent that states which fail to do so will impose a severe hardship upon their utility ratepayers.

In 1958, an attempt was made in Congress to limit the federal reimbursement provisions for utility relocation costs. Under the proposal, reimbursement would have been limited to 70 per cent of the actual costs, and would have been available only to those states whose laws required the repayment of such costs to the utilities, as distinguished from states whose laws merely authorized but did not require such repayment. However, the amendment was defeated.

The statutes passed or considered by states to take advantage of the federal act met with a number of constitutional objections.

The objection most frequently urged was that the state, through such legislation, was undertaking to fulfill an obligation imposed by law upon the utility companies, and was therefore applying public funds for a private purpose.

In every instance it was ruled that such expenditures were for a public purpose, even though they incidentally re-

acted to the benefit of private companies and individuals.

On the other hand, this objection has been sustained by the Supreme Court of Tennessee and by the attorney general of Texas.

A second constitutional objection that has been raised against this type of legislation is that it impairs obligation of contract.

The theory behind this argument is that the utility company, in placing its facilities in the public ways had contracted to remove or relocate such facilities at their own expense when required to do so by proper authorities. It was argued that a statute which would relieve the utilities of that obligation would destroy the contract.

In two cases, the court ruled that the state did not destroy the contract but rather allowed the state to rescind the contract with the consent of the utility company.

A third constitutional objection is that it violates constitutional prohibitions against applying receipts from gasoline taxes and license fees for any purpose other than the construction or reconstruction of highways.

In Maine a divided Supreme Court upheld this objection with the result that, while utilities may be paid for their relocation costs, they may not be paid out of the highway fund. As a consequence, the Maine legislature has made a special appropriation from the general fund for this purpose.

The Supreme Courts of New Hampshire and Pennsylvania both rejected this contention on the ground that the relocation of the utility facilities is a part of the construction or reconstruction of the highways.

It seems safe to predict that the Massachusetts statute would not be stricken down on the ground that it constitutes an application of public funds for private purposes. The Supreme Judicial Court of Massachusetts has held that the legislature is not limited in providing compensation to damages which the land owner is entitled to receive as a matter of constitutional right, but may extend compensation to instances where an exercise of eminent domain would result in a real hardship to one whose property has been damaged or injured.

The funds authorized for reimbursement of utility relocation costs by the Massachusetts Statute are derived from a special bond issue. The statute provides that the interest and principal on

account of such bonds shall be paid from the highway fund. There may, therefore, be some doubt as to the constitutionality of the present statute insofar as it pertains to reimbursement of utility relocation costs from what is ultimately the highway fund.

If the Act should be construed as allowing the Department of Public Works to reimburse one utility but not another, it would seem that it deprives the unpaid utilities of the equal protection of the law guaranteed by the constitution.

But, if the statute is construed as allowing the department to determine either to reimburse all utilities or to reimburse none of them, it would seem that the legislature has completely delegated the policy-making power in this regard to the department.

Although the legislature may, after having determined a policy to be pursued, delegate broad powers to administrative officers for the purpose of working out the details of that policy, the legislature may not delegate the policy-making power to such administrative officers.

Gas utilities of every state owe a duty to their consumers to exert every legitimate effort to obtain legislation which will not only permit but will require the state to take full advantage of the federal act.

The federal highway program is of tremendous proportion and the work has just begun. The program visualizes a network of super highways with all that it implies, and, since one of its purposes is national defense, it contemplates bringing such super highways directly into heavily populated urban areas.

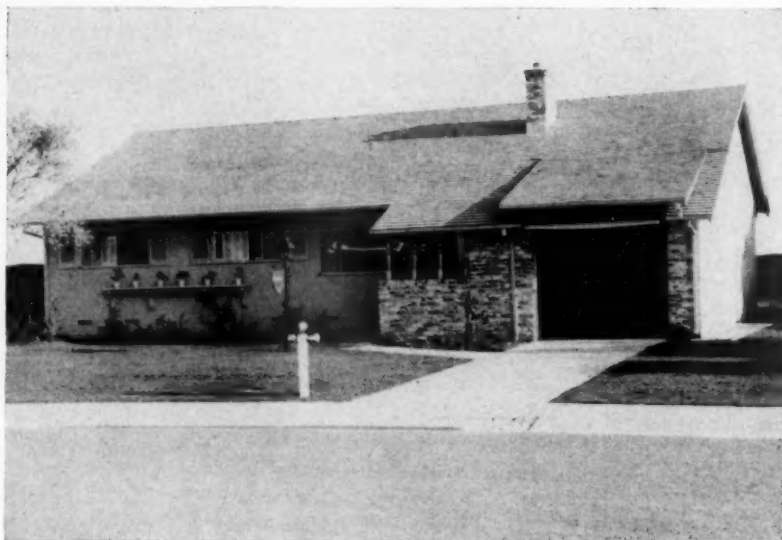
Such a program will result in utility relocation costs of unprecedented magnitude.

While the burden of such costs will first be felt by the utility company, it will of course be ultimately passed on to the company's consumers.

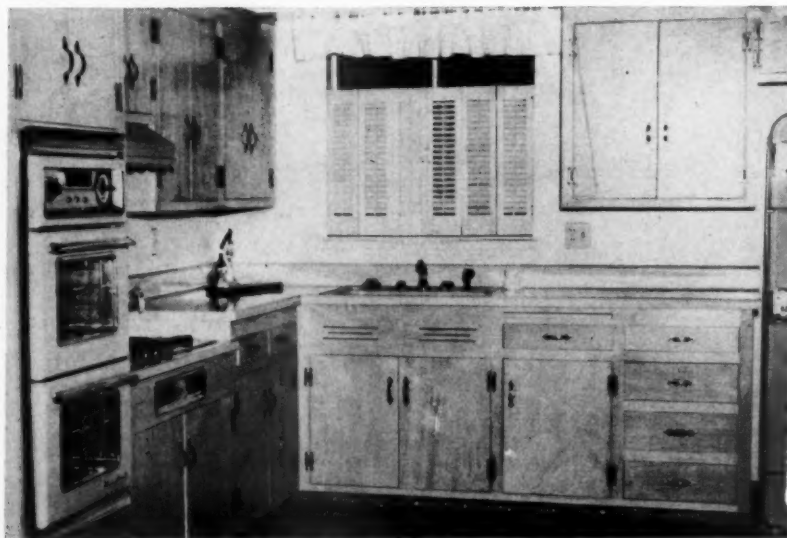
Whatever might be the equities of this situation if all states were afforded equal treatment, the existence of the federal act and the resulting legislation in other states result in a double burden on the citizens of those states that fail to take advantage of the federal act. These citizens must pay for their own utility relocation costs in the form of higher rates, and for the utility relocation costs of other states in the form of taxation.

All utilities owe it to their customers to make every effort to relieve them of such unfair treatment.

All-gas success story has 850 happy endings



The "Tam O'Shanter" is the model in the 850-home, all-gas development in Sacramento, Calif.



An interior view of the "Tam O'Shanter" shows a section of its streamlined all-gas kitchen

There's a success story being told in Sacramento, Calif., that has 850 happy endings. The hero of the plot is the city's newest and largest subdivision, an 850-home all-gas development located in the South area of California's capital city.

The subdivision, known as Bowling Green, was developed by Artiz and Cook Realty Co. in cooperation with the Pacific Gas and Electric Co. which supplies natural gas to the area. In an agreement between the two firms, the developer:

1. Installed built-in gas ranges, water heaters, furnaces and fireplace kindlers in all model homes, and included this gas equipment in the purchase price of all homes to be sold.

2. Carried the natural gas theme in all advertising in connection with the promotion and sales of homes—"Naturally, It's Gas."

3. Instructed all salesmen carefully in selling gas-equipped homes, and made them available for training in the selling features of gas appliances.

The utility agreed to use the following regularly scheduled advertising media in support of the promotion:

1. Bill inserts—115,000 mailed with monthly bills to gas customers in the Sacramento area advertising the sales of Bowling Green homes.

2. Fifteen, 24-sheet billboards, eight of which are illuminated, supporting the subdivider's selling campaign.

3. The subdivision was mentioned on at least one commercial in the company-sponsored TV program.

P.G. and E. also furnished fireplace kindlers for all homes; provided six hostesses for at least four week ends following the opening of the model homes; assisted in coordinating the promotion; and helped educate the subdivider's sales people in the advantages of gas equipment.

Hostesses were part-time company employees selected for appearance and personality. The girls were trained by the utility sales personnel on how to sell the advantages of gas cooking. In order to stimulate additional interest in this particular subdivision, the hostesses served coffee and cookies to the people visiting the model homes. On the opening day of the subdivision, they used the rotisserie in the gas ovens to cook turkeys, hams and chickens.

To be sure that all the subdivider's

sales personnel were acquainted with the advantages of the gas equipment being displayed, they were invited to a "chefs' dinner," in the company's auditorium. This was a unique program, for those invited actually participated in the preparation of their meal.

In addition to the demonstration by a home economist, a manufacturer's representative explained the outstanding features of his product.

The seven model homes were beautifully landscaped and furnished prior to the opening. Each home has a five-foot high ornamental gas lamp near the front entrance which is included in the purchase price of the home.

Purchasers were offered 14 exteriors and seven floor plans, both reverse and conventional. All homes have three or four bedrooms with either two full baths or one and one-half baths. They are priced from \$14,250 to \$18,850.

The builder installed top-of-the-line, built-in gas ranges, with such refinements as rotisserie, top burner control, and center simmer burner. This was found to be a tremendous advantage in selling the home, and the utility and manufacturer found that it helped in the selling of gas built-in equipment at other locations.

As a special attraction, the builder constructed an 850-foot fence, consisting of 13 eight-foot brick pilons connected by six-foot grapestake fencing. Each pylon has a gas burner which shoots a flame three feet into the air; these burn

Home service directors meet in St. Louis



Lucy Slagle (seated in center at head of table), Atlanta Gas Light Co., presided over the general committee meeting at the A. G. A. Home Service Committee's conference Oct. 28-29 in St. Louis. Among future Committee projects are the A. G. A. Home Service Workshop Jan. 29-31, 1959, in New Orleans; a home call survey on the thermostatic top burner; a customer information chart or brochure on the rotisserie; and a program to revise the booklet, "The Home Service Demonstration"

about four hours each night.

The utility sent letters to all purchasers, congratulating them on their selection of a home in Bowling Green and advising them of the service that is available on their gas equipment after they move in. Home calls are made by company hostesses to instruct the housewife in the proper care and use of the appli-

ances. At the time of the call, they check for any defects in the equipment and report them for correction.

To illustrate the success of this promotion, 61 homes were sold during the first two-week period after opening and 90 per cent of the first unit, consisting of 116 homes, had buyers at the end of one month's time.

Develop

(Continued from page 3)

culation and to increase pressure on the solution returning from the absorber was added. Incorporation of the pump represented an added cost, but advantages gained permitted other reductions which more than offset this added cost. The pump made available pressure which was utilized in the heat exchangers to increase turbulence; this resulted

in higher heat transfer coefficients and smaller sizes. The presence of the pump also permitted the use of higher solution concentrations which resulted in a marked decrease in the size of the absorber. These various reductions in component sizes resulted finally in a reduction of the over-all size of the unit.

The fact that there is now a pressure area in the system where the pressure is slightly greater than atmospheric made it possible to eliminate noncondensable

gases automatically. One of the service difficulties with previous units of this type had been the fact that when noncondensable gases accumulated in the system it was necessary to pump them out with a vacuum pump at intervals since the whole system operated at subatmospheric pressure. In the present unit a combination of thermally actuated valve and check valve in series allows noncondensable gases to be exhausted from the system as they collect.

National LP-Gas Council elects DeVoe, Carpenter, Donnelly

W. F. (FRANK) DEVOE, manager of LP-Gas sales, Phillips Petroleum Co., Bartlesville, Okla., has been elected president of the National LP-Gas Council. Frank Carpenter, president, United Petroleum Gas Co., Minneapolis, Minn., has been chosen chairman of the executive committee, and James

F. Donnelly, Sr., assistant to the executive vice-president, A. O. Smith Corp., Milwaukee, Wis., has been named treasurer.

Mr. DeVoe has been chairman of the council's executive committee. He succeeds E. Carl Sorby, vice-president, Geo. D. Roper Corp., Kankakee, Ill., who has become chairman of

the council's advisory board. Mr. Carpenter has been serving both on the council's executive committee and as chairman of its dealer sales aid committee. Mr. Donnelly, past president of the Gas Appliance Manufacturers Association, is a member of the board of directors of the American Gas Association.

Facts and Figures

Prepared by A. G. A. Bureau of Statistics

The United States Department of Labor has announced that 111,000 new home starts were begun in October. This figure is 14.4 per cent greater than that of the comparable month in 1957. At a seasonally adjusted rate of 1,260,000 units, this figure represents the highest rate for any month in three years. When averaged for the first 10 months of this year, the annual rate of housing amounted to a seasonally adjusted total of 1,076,000.

The impressive gains registered in home building during the past few months are already beginning to have their effect on shipments of gas ranges, and gas-fired central heating and automatic water heating equipment, which were up during October of this year—10.2 per cent, 9.2 per cent, and 19.9 per cent, respectively—over October 1957.

Total gas sales of the gas utility and pipeline industry during September 1958 amounted to 5,050 million therms, an increase of 2.5 per cent over the 4,925 million therms sold in September of last year. Sales of gas to industrial consumers increased from 3,582 million therms to 3,663 million therms, an increase of 2.3 per cent over last year. Industrial production, as measured by the Federal Reserve Board index, was down 4.9 per cent from September 1957. The index of industrial production (1947-1949 = 100) for September 1958 was 137, seven points less than the index of 144 for September of last year. The American Gas Association's September index of gas utility and pipeline sales is 223.1 (1947-1949 = 100).

During the 12 months ended Sept. 30, 1958, total utility and pipeline sales of gas aggregated 79,298 million therms, equivalent to an increase of 5.2 per cent over the 75,387 million therms consumed in the 12 months ended Sept. 30, 1957.

(Source of residential appliance data: Gas Appliance Manufacturers Association; National Electrical Manufacturers Association; "Fuel Oil and Oil Heat," and American Home Laundry Manufacturers Association.)

SALES OF GAS AND ELECTRIC RESIDENTIAL APPLIANCES DURING OCTOBER 1958 (WITH PER CENT CHANGES FROM THE CORRESPONDING PERIOD OF THE PRIOR YEAR)

	October		September		Nine Months Ended Sept. 30	
	Units	Per Cent Change	Units	Per Cent Change	Units	Per Cent Change
RANGES (including built-ins)						
Gas	215,400	+10.2	182,700	-4.9	1,333,300	-10.1
Electric	n.a.	n.a.	121,800	-2.4	945,700	-6.7
WATER HEATERS						
Gas	256,300	+9.2	228,800	+6.2	2,001,900	+2.6
Electric	n.a.	n.a.	74,300	+6.4	611,800	+4.2
GAS HEATING—Total	146,300	+19.9	166,800	+20.2	791,200	+10.7
Furnaces	106,800	+29.3	117,200	+24.8	594,500	+14.3
Boilers	17,700	+20.4	19,800	+28.6	86,700	+13.0
Conversion Burners	21,800	-11.7	29,800	+1.0	110,000	-6.9
OIL-FIRED BURNER INSTALLATIONS	73,090	-13.4	62,709	-11.7	364,377	-11.7
DRYERS						
Gas	n.a.	n.a.	48,730	-5.1	221,940	-12.2
Electric	n.a.	n.a.	110,010	-4.4	508,690	-11.3

GAS SALES TO ULTIMATE CONSUMERS BY UTILITIES AND PIPELINES DURING SEPTEMBER (MILLIONS OF THERMS)

	1958	1957	Per Cent Change
Month of September			
All types of Gas	5,050.2	4,925.1	+2.5
Natural Gas	4,952.8	4,821.8	+2.7
Other Gases	97.4	103.3	-5.7
Twelve Months Ended Sept. 30			
All types of Gas	79,297.9	75,387.0	+5.2
Natural Gas	76,889.4	73,090.6	+5.2
Other Gases	2,408.5	2,296.4	+4.9
September Index of Monthly Utility Gas Sales (1947-49 = 100)	223.1	217.6	+2.5

PERTINENT BUSINESS INDICATORS, SEPTEMBER (WITH PER CENT CHANGES FROM CORRESPONDING PERIOD OF THE PRIOR YEAR)

	September			August		
	1958	1957	Per Cent Change	1958	1957	Per Cent Change
Industrial activity (1947-49 = 100)	137	144	-4.9	136	145	-6.2
Consumer prices (1947-49 = 100)	123.7	121.1	+2.1	123.7	121.0	+2.2
Housing starts, Non-farm (thousands)	118.0	91.9	+28.4	119.0	100.0	+19.0
New private constr. expenditures (\$ million)	3,229	3,185	+1.4	3,215	3,196	+0.6
Construction costs (1947-49 = 100)	171.1	162.7	+5.2	170.7	162.9	+4.8

Industry news

Norge will market five new gas appliances

THE NORGE DIVISION of Borg-Warner Corp. will introduce five new major appliances soon in a bid for more of the \$750,000,000-a-year gas appliance business.

Judson S. Sayre, president, said that Norge will market a gas refrigerator, two gas combination washer-dryers, a built-in gas range, and a gas range with a vertical broiler. All except the built-in gas ranges were shown for the first time during the American Gas Association's convention in Atlantic City.

Norge, with an estimated annual volume of \$100,000,000, now sells gas ranges, clothes dryers and water heaters, and a full line of electric kitchen and laundry appliances.

Mr. Sayre expressed the hope that the Norge effort would be viewed by utilities as an opportunity for the gas industry to develop closer contact with the Borg-Warner Corp. research and engineering facilities.

Delegates convene at Wisconsin Utilities Association Conference

SOME 600 DELEGATES heard 40 reports at the annual convention of the electric and gas operating and sales sections of the Wisconsin Utilities Association. The convention was held Oct. 15-17 in Milwaukee, Wis.

Edmund J. Krawczyk, newly appointed member of the Public Service Commission of Wisconsin, was the principal speaker at the conference.

He traced the history of the commission since its inception and explained its functions in government affairs.

The convention, which was designed to discuss solutions to electric and gas operating and sales problems, had an agenda of talks, panel discussions, films and slides.

Gas operating section speakers included

F. L. Larkin, president of the association and vice-president-industrial relations, Wisconsin Electric Power Co., who warned businessmen against what he called the general socialistic drift; J. J. Trebilcock, manager of operations, Michigan Wisconsin Pipe Line Co., who discussed the progress made so far in enlarging the state's supplies of natural gas; W. J. Burmeister, maintenance engineer, Wisconsin Highway Department, who explained the highway safety code and its application during gas main construction; and C. H. Erickson, chief engineer, The Peoples Natural Gas Co., who presented a soil box demonstration of corrosion processes and control.

The joint gas and electric sales section featured John J. Benson, director of the Wisconsin industrial development division, who

spoke about the results of civic and industrial promotions to encourage new industries to locate in the state; and A. G. Blitz, Wisconsin Public Service Corp., who described his company's dealer aid program.

Hilbert F. Kolb, superintendent, southern division, Wisconsin Natural Gas Co., was appointed chairman of the gas operating section. L. A. Lenz, assistant to the southern division manager, Wisconsin Michigan Power Co., was named vice-chairman.

M. R. Norton, general sales manager, Wisconsin Power and Light Co., became chairman of the gas sales section. Philip E. Casper, assistant vice-president of sales, Milwaukee Gas Light, was named vice-chairman.

Arkansas Louisiana Gas plans \$15,000,000 pipeline project

A \$15,000,000 INDUSTRIAL GAS pipeline development for Arkansas, which will extend from near Clarksville across the state to the Mississippi River, has been given formal approval by the Arkansas Louisiana Gas Co. board of directors. The pipeline construction project involves two major segments, each connecting to the company's system.

The first segment will consist of a 16-inch pipeline junction in Hot Spring County, east-

ward approximately 130 miles to Helena, Ark., on the Mississippi River. This line, estimated to cost about \$9,000,000, will enable the company to serve the new generating plant of Arkansas Power & Light Co., which is scheduled for completion early in 1961, and is designed as an 18-inch line.

The line from the Aetna field area will be constructed by Arkansas Louisiana Gas, but the Perla-to-Helena line will be constructed

by the company's new wholly owned subsidiary, Arkansas Industrial Pipeline Corp.

"The Industrial Pipeline Corp. has been established to take gas anywhere in Arkansas Louisiana Gas Co.'s territory or contiguous territories to serve industrial customers," said W. R. Stephens, president and chairman of the board, Arkansas Louisiana Gas. "It has been conceived with the idea of providing economic fuel to attract industry to Arkansas."

Ten years hence

ROBERT SMITH, assistant director of research, American Gas Association, demonstrates his prophetic powers in:

Through the Looking Glass or Ten Years Ahead

Flameless burners, cold from heat—
Substitute gas from shale and peat.
Household climate—not just cool,
But also dry—from Spring to Yule.
Domestic ranges—housewife's delight.
Gas fed fuel cell provides the light.
Commercial cooking—capacity high—
With cooler kitchens, almost high—
Automaticity, that's the word.
Watch the future—it'll soon be heard.
Automation on pipelines, too,
Will do the things you want it to:
Open valves and transmit flows,
Push-button control of where it goes,
Operate with lower cost,
Construct a line with less time lost—
Leak prevention—better ways
Stop corrosion—so it stays.
That's the story, the next ten years—
Let's work together and grease the gears!

A. G. A. advertising committee meets



The American Gas Association's Domestic Advertising Committee met Nov. 12-13 in New York City to discuss current projects. Delegates are: (l. to r., seated) M. H. North, Richard Eymann, E. E. Stuenkel, Neal Hall, Norval Jennings, Mrs. A. E. Evans, W. D. Williams (chairman), Thomas Lane, F. H. J. Rider, J. S. Spaulding; (l. to r., standing) Daniel Daley, T. H. Evans, C. F. Westin, P. E. Arnold, K. F. Muldoon, R. L. Leusch, Ralph Rosenberg, L. M. Hammer, A. B. Young and G. A. Webber

Model rooms feature new concept in built-in storage components



The "Series 700" kitchen features the latest in built-in appliances, storage units

A NEW CONCEPT in built-in storage components, designed by Paul McCobb, was featured in an exhibit at the National Housing Center, Washington, D. C., during the summer. Created for Mutschler Brothers, Nappanee, Ind., manufacturers of custom kitchens, the exhibit consisted of four completely furnished room settings which measured 60 by 16 feet over-all. The rooms were a kitchen, a living-dining room, a bathroom and a dressing room.

Known as "Series 700," the display featured more than 50 contemporary-styled storage units, including drawers, shelves, closets and cupboards. It also included the first through-the-house coordinated built-in storage collection to be mass produced. Made of birch, the cabinets were shown in a variety of finishes, both natural grain and painted.

The storage units offered a choice of open or closed cabinets, wardrobes, pass-through cupboards, pull-out utility trays, three work heights, two depths, and a choice of marble, tile, wood, or plastic counter tops. Satin aluminum or wood leg stanchions supported the off-the-floor level, desk level, and decorator level units in custom arrangements.

The "Series 700" display started with a custom-looking "dream" kitchen, which uti-

lized a contemporary grouping of various types of cabinets, including high ones for storing vacuum cleaner, broom, and other tall objects; shallow shelves for food storage; pull-out drawers for sewing equipment; and deep shelves for kitchen paraphernalia.

The kitchen was decorated in yellow and orange, and was completely equipped with gas range, refrigerator, oven, washer-dryer combination, automatic dishwasher, and intercom system. It also featured a center cooking island with a counter top range.

A serve-through unit separated the kitchen from the living-dining area. Decorated in bright but cool shades of blue and green, this area included one long wall of open shelf and closed door units. Another wall provided space for hi-fi components, television, records, books, and hobby equipment.

Probably the most striking rooms in the exhibit were the adjoining dressing room and bath. Done in tones of pinks and oranges, the area had a huge six and one-half by four-foot tile bath, and double sinks which faced a long dressing table, all made of "Series 700" units. Along one wall were five ceiling-to-floor wardrobe units. Across the rear wall were both standing units and hanging wall units.

LILCO launches full-scale automatic dryer sales campaign

LONG ISLAND LIGHTING CO. opened its Fall Automatic Dryer Sales Campaign promotion on Oct. 1. Aimed at more than 500,000 families located in LILCO's territory, the program will run through Dec. 20.

Some 300 dealers and 14 appliance manufacturers are cooperating in the full-scale promotion, which is the first such program

since LILCO discontinued its retail merchandising last July 1.

The theme of the campaign is "\$10 For Your Old Clothesline." Each customer is being offered \$10 for her old clothesline toward the purchase of an automatic clothes dryer. Each dealer, in turn, is being reimbursed for the bonus payments through

LILCO, provided that the dryer sold is one of the 14 cooperating brands and that the customer is serviced by LILCO.

The manufacturers taking part with tie-in advertising programs include Easy, Speed-Queen, Hamilton, Caloric, Dexter, RCA Whirlpool, Hotpoint, Kelvinator, Maytag, Norge, Westinghouse, Roper, and Kenmore.

Con Edison, Utility Workers Union give \$131,000 to charity

CHECKS REPRESENTING more than \$131,000 in pledges, made this year by Con Edison employees in the annual Con Edison-Utility Workers Union Charities Drive, were received Sept. 29 by six New York volunteer agencies.

The presentations were made by Andrew J. McMahon, president of Local 1-2, Utility Workers Union of America, CIO-AFL, on behalf of the union, and by Dwight S. Sargent, Con Edison personnel director, on behalf of the company.

Con Edison's annual charities drive, the eighth such annual campaign, was held earlier this summer. This drive combines in one large-scale effort the many separate appeals formerly made by the company throughout the year.

The annual campaigns, endorsed by both the union and Con Edison management, have progressively raised larger amounts for the participating agencies. Last year, the total came close to \$123,000.

An unusual feature of Con Edison's drive

is that provision is made for employees to meet their pledges through a year-long payroll deduction.

In attendance at the presentation ceremony at Con Edison's headquarters were James W. Cook, American Red Cross; James J. Deely, The Greater New York Fund; Commander Holland French, The Salvation Army; Donald G. Price, New York Heart Association; Robert A. Loberfeld, New York City Cancer Committee; and Robert I. Rogin, United Cerebral Palsy Association.

Transcontinental begins third underwater crossing to serve New York

A NEW DUAL natural gas pipe line under the Hudson River, crossing from North Bergen, N. J. to 72nd Street, Manhattan, will be constructed by Transcontinental Gas Pipe Line Corp., principal supplier of natural gas to New York, Brooklyn and Long Island.

With the completion of these and other facilities now under construction, increased supplies of natural gas for millions of metropolitan residents will be made possible via Consolidated Edison Co. of New York, Brooklyn Union Gas Co., Brooklyn Borough Gas Co. and Long Island Lighting Co.

Dredging of a trench at the bottom of the river started Nov. 25, preparatory to laying two 24-inch parallel pipes across the Hudson.

The new lines will be Transcontinental's third underwater crossing linking the metropolitan area with gas fields of the Gulf Coast.

Like the other two, the third crossing to be laid under the Hudson will connect Transcontinental's 1,840-mile main line system with New York distributing facilities, and deliver gas from as far away as the Rio Grande.

A direct tie-in will be made with a new

Consolidated Edison gas main crossing Manhattan in the vicinity of 72nd Street. All other utilities in New York, Brooklyn, Staten Island and Long Island are interconnected with the Consolidated Edison system so that gas deliveries to the entire area can be drawn on as needed by any of them.

The new Hudson River crossing is part of a \$167,000,000 construction program which will enable Transcontinental to increase its daily allocated gas deliveries by 238 million cubic feet to a total of 1,191,000,000 cubic feet for the entire system.

A. G. A. announces new publications issued during October, November

INDUSTRIAL AND COMMERCIAL

- **The Effect of Heat on Chemical and Physical Properties of Poly Fibers**, by Harold B. Sturtevant, Jr. Free.
- **The Curing of Resin Treated Fabrics Made from Natural Fibers**, by Dr. Melvin D. Hurwitz. Free.
- **Heat Treatment of Arnel Fabrics**, by Normand Seymore Pliner. Free.
- **Convection Air Application to Fabric Drying**, by W. A. Metcalfe. Free.
- **What the Textile School Can Contribute**, by Dr. Edward R. Murray. Free.
- **Textiles, Air and Gas Research in the Future**, by John Sellors, Jr., and Robert C. LeMay. Free.

ACCIDENT PREVENTION

- **Gas Industry Poster Sets: fourth series**, 1958. \$1.25 per set.

NEW FREEDOM

- **Teachers Learn by Doing in Gas Range Workshops**. Reprint from *What's New in Home Economics*. 12½ cents.
- **Gas Aids Sales**. Reprint from *Practical Builder*. 20 cents.
- **Kitchens for Practical Dreamers**. 47 two-inch-square color slides. \$39.50.
- **Family Kitchen with a Theme**. Reprint from *Better Homes and Gardens*. 15½ cents.
- **1959 Gas Calendar (Bulletin # 127)**, by the O'Reilly Co. 100-999 copies: 15½ cents each; 1,000-4,999 copies: 13½ cents each; 5,000-9,999 copies: 13 cents each; 10,000 or more copies: 11½ cents each.
- **1959 Gas Calendar (Bulletin # 131)**, by the Eldredge Lithograph & Printing Co., Inc., 225 Varick Street, New York 14, N. Y. Order from company. 500-999 copies: 12½ cents each; 1,000-4,999 copies: 10 cents each; 5,000-9,999 copies: 9¾ cents each; 10,000 or more copies: 9½ cents each.

PROMOTION

- **Air Conditioned by Automatic Gas Decal**.

Decal says A. G. A., but bears no brand name. 50 cents.

- **June Haver-Fred MacMurray Christmas Plan Book**. 90 cents.
- **June Haver-Fred MacMurray Dealer Film**. \$10.
- **June Haver-Fred MacMurray Radio Spots**. Two spots on one record. \$2.
- **June Haver-Fred MacMurray Christmas Display**. \$4.55.
- **June Haver-Fred MacMurray Gift Certificates**. Two cents each.

STATISTICAL

- **Review of Fatal Injuries in the Gas Utility Industry During 1957**. Report by Bureau of Statistics. One copy: free to A. G. A. members, 10 cents to non-members; 2-50 copies: 10 cents each; 51-99 copies: seven cents each to A. G. A. members, 10 cents each to non-members; 100-500 copies: five cents each to A. G. A. members, 10 cents each to non-members.
- **Quarterly Report of Gas Industry Operations, Second Quarter, 1958**. Free.
- **Monthly Bulletin of Utility Gas Sales, August 1958**. Free.
- **Monthly Bulletin of Utility Gas Sales, September 1958**. Free.

LABORATORIES

- **Addenda to American Standard Z21.1.1-1956—Z21.1.1a-1957**. Approval Requirements for Domestic Gas Ranges, Vol. I, Free Standing Units, Z21.1.1b-1958, effective Jan. 1, 1959. 50 cents.
- **Addenda to American Standard Z21.1.2-1956—Z21.1.2a-1957**. Approval Requirements for Domestic Gas Ranges, Vol. II, Built-in Domestic Cooking Units, Z21.1.2b-1958, effective Jan. 1, 1959. 50 cents.
- **Addenda to American Standard Z21.10.1-1956—Z21.10.1a-1957**. Approval Requirements for Gas Water Heaters, Vol. I, Z21.10.1b-1958, effective Jan. 1, 1959. 25 cents.
- **Addenda to American Standard Z21.10.2-**

1956—Z21.10.2a-1957. Approval Requirements for Gas Water Heaters, Vol. II, Side-arm Type Water Heaters, Z21.10.2b-1958, effective Jan. 1, 1959. 25 cents.

- **Addenda to American Standard Z21.5-1956—Z21.5a-1957**. Approval Requirements for Domestic Gas Clothes Dryers, Z21.5b-1958, effective Jan. 1, 1959. 50 cents.
- **Addenda to American Standard Z21.11-1956—Z21.11a-1957**. Approval Requirements for Gas-Fired Room Heaters, Z21.11b-1958, effective Jan. 1, 1959. 25 cents.
- **Addenda to American Standard Z21.16-1957**. Approval Requirements for Gas Unit Heaters, Z21.16a-1958, effective Jan. 1, 1959. 50 cents.

• **Addenda to American Standard Z21.6-1957**. Approval Requirements for Domestic Gas-Fired Incinerators, Z21.6a-1958, effective Jan. 1, 1959. 15 cents.

• **Heat Application to Commercial Range Heavy-Duty Top Sections, Part IV—Fry Top Ranges**. A. G. A. Laboratories Research Report No. 1284, by Richard A. Jacobson. \$1.50.

• **American Standard Listing Requirements for Manually Operated Gas Valves**, effective Jan. 1, 1959, Z21.15-1958. Printed. \$2.

ACCOUNTING

• **1958 Proceedings, National Conference of Electric and Gas Utility Accountants**, by A. G. A.-EEI. \$5 to members, \$7.50 to non-members.

RESEARCH

- **Report on Project 1K-7: A Study of the Effect of Heating Rate by Gas on Metal Flow Characteristics or Plasticity and Die Wear, Part II**, by C. A. Turner and A. A. Furczyk. \$1.
- **Report on Project 1V-11: Factors Affecting the Use of Gas Fuel for Vacuum or Inert Gas Processing of Metals**, by D. H. Turner. 50 cents.

PUBLIC INFORMATION

- **Mr. Gas Meets the Neighbors**. Community Relations Booklet. 25 cents.

Highlights of cases before the Federal Power Commission

Bureau of Statistics, American Gas Association

Certificate cases

• **American Louisiana Pipe Line Co.** has received a permanent certificate authorizing natural gas pipeline facilities which were placed in operation in 1956 when temporary authorization was granted. These facilities, which cost nearly \$7.5 million, include two new 12,000 horsepower compressor stations in Ohio and Indiana, and

the addition of 4,000 compressor horsepower to existing stations in Mississippi and Tennessee. Also included in the authorization is a meter station and three miles of pipeline in Cameron Parish, La., which will receive gas from Gulf Refining Co. and raise the average daily system capacity by 36 million cubic feet to a total of 357 million cubic feet. The FPC has deferred both a certificate for the second step

of the application involving 18,000 compressor horsepower in two new stations estimated to cost an additional \$7.5 million, and action on the Panhandle Eastern Pipe Line Co. proposal to abandon service to Michigan Consolidated Gas Co., an affiliate of American Louisiana Pipe Line.

• **Atlantic Seaboard Corp.** has been au-

thorized to construct approximately 24 miles of looplines in Virginia and West Virginia at an estimated cost of nearly \$2.5 million. These additional facilities will raise design peak day capacity by 62.1 million cubic feet to a total of 766.7 million cubic feet, in order to meet the increased demands of customers in the Washington and Baltimore areas.

- **Cities Service Gas Co.** has received authorization to construct two 1,350 horsepower compressor units at an estimated cost of \$787,000. These natural gas facilities are required to prevent the Ulysses and Hugoton stations from operating at excessive overloads as a result of declining well pressures in the Hugoton Field.

- **Coastal Transmission Corp.**, in an amended application, has been authorized to reduce its proposed main transmission line to 562.4 miles, 12 miles less than originally authorized. As a result, the company will save \$159,000 in pipeline costs.

- **El Paso Natural Gas Co.** has been granted temporary authority to acquire and construct natural gas facilities estimated to cost about \$4.8 million. Included in the authorization is the addition of 4,650 horsepower in two new compressor stations, 39 miles of field lines, 17 miles of fuel pipeline, metering stations and appurtenant facilities. The company will acquire from Tennessee Gas Transmission Co. a 3,520 horsepower compressor station and will increase its capacity to 4,480 horsepower. El Paso Natural Gas will then be able to purchase approximately 27 million cubic feet of natural gas daily from Phillips Petroleum Co. in the East Maljamar and Kemnity areas in Lea County, N. M.

- **Houston Texas Gas and Oil Corp.**, in an amended application, has been authorized to reduce its proposed main transmission line to 914.2 miles, 28.4 miles less than originally authorized. As a result, a saving of \$1.1 million in pipeline costs will be effected.

- **Mississippi River Fuel Corp.** has been authorized to construct nearly 37 miles of loop lines and nearly four miles of supply line, together with a 1,320 horsepower compressor station, in Louisiana at an estimated cost of approximately \$3.7 million. These facilities will enable the company to purchase up to 36 million cubic feet of natural gas daily from Arkansas Louisiana Gas Co., in order to supply the demands of present customers. Arkansas Louisiana Gas, in turn, will construct a 1,320 horsepower compressor unit and meter station at a cost of nearly \$332,000. The gas will be sold from Oct. 15 of each year through April 16 of the succeeding year for a five-year period ending April 16, 1963.

- **Natural Gas Storage Co. of Illinois** has received authorization to construct \$2.6 million of natural gas facilities for the in-

jection of natural gas into its Herscher storage field in Kankakee County, Ill. The project includes 12 injection-withdrawal wells, three observation wells, a 1,330 horsepower compressor plant, and 2.4 miles of gathering lines.

- **Permian Basin Pipeline Co.** has been granted authorization to construct about 61 miles of lateral supply line, 11 miles of field lines, and nine meter stations, at an estimated cost of about \$3.7 million. These natural gas facilities will be used to purchase, receive, dehydrate and transport natural gas produced in Emperor Field, Winkler County, Texas.

- **Texas Gas Transmission Corp.** has received temporary authorization to construct and operate natural gas facilities designed to provide an additional 31 million cubic feet of daily delivery capacity for existing customers during the winter of 1958-59. The project, estimated at a cost of nearly \$2.5 million, includes 20 miles of loop lines, 2,440 additional horsepower in two compressor stations, and appurtenant facilities in Louisiana, Kentucky, Indiana and Illinois. The present authorization is only one phase of a \$20 million program to increase sales capacity by 133.7 million cubic feet daily.

- **Transcontinental Gas Pipe Line Corp.** has filed an application requesting authorization to construct and operate about 16 miles of purchase laterals and three metering stations at an estimated cost of \$2.2 million. These facilities will be used to tap the estimated 275 billion cubic feet of natural gas reserves offshore Vermilion Parish, La.

- **Trunkline Gas Co.** has filed an application seeking authority for the construction of natural gas pipeline facilities, estimated at an over-all cost of \$81.5 million, in order to serve Consumers Power Co. with an additional 135 million cubic feet of natural gas daily by Oct. 1, 1959. The project includes construction of 204 miles of 26-inch transmission line from Tuscola, Ill., to Vistula, Ind.; a 464-mile loop line between Longville, La., and Tuscola, Ill.; a 45-mile loop line in Texas; 183 miles of supply lines; and 3,000 additional horsepower at the Longville compressor station. The system capacity would increase from 375 to 510 million cubic feet daily and would meet the demands of some 460,000 customers of Consumers Gas Co. in about 300 communities in Michigan.

Rate cases

- **Atlantic Seaboard Corp.** has filed an application requesting a \$2.2 million, or 3.4 per cent, annual wholesale natural gas rate increase, in addition to a \$4.1 million annual increase now being collected subject to refund. The latest proposal would affect 12 wholesale customers in Virginia, Maryland, Kentucky, West Virginia, Pennsylvania and the District of Columbia. The

basis for the increase is a proposed increase by the supplier, United Fuel Gas Co., and a claimed 6.75 per cent rate of return.

- **Home Gas Co.** has filed a 6.7 per cent wholesale natural gas rate increase, amounting to \$752,000 on an annual basis, and affecting six wholesale customers in New York. The company, which is collecting a \$673,000 increase subject to refund, based its latest request on increased wages, a 6.75 per cent return, and the proposed rate increase of its supplier, Manufacturers Light and Heat Co.

- **Hope Natural Gas Co.** has applied for a \$4.7 million, or 10.3 per cent, annual increase in its natural gas rates to seven wholesale customers in West Virginia, Pennsylvania, Ohio and New York. The company is collecting, subject to refund, a \$1 million increase filed in 1954 and a \$3.8 million increase filed in 1957. The latest filing is based upon higher taxes, salaries and wages, employee benefits, purchased gas costs, and an increased cost of materials purchased. A 6.5 per cent rate of return is also claimed.

- **Kentucky Gas Transmission Corp.** has filed a \$1.7 million or 5 per cent, annual wholesale natural gas rate increase which would affect 10 wholesale customers in Kentucky and Ohio. This filing is in addition to a \$2.4 million increase now being collected, subject to refund, and is based upon a claimed 6.75 per cent rate of return and a proposed rate increase of its supplier, United Fuel Gas Co.

- **Manufacturers Light and Heat Co.**, in an application, is proposing a \$1.3 million, or 4.5 per cent, annual rate increase which would affect 25 wholesale natural gas customers in Maryland, New Jersey, New York, Ohio, Pennsylvania and West Virginia. This filing is in addition to a \$1.8 million increase now being collected subject to refund. While claiming a 6.75 per cent rate of return, the company also cited increased wages and other costs, including the proposed increases of its suppliers, Atlantic Seaboard Corp., United Fuel Gas Co., Texas Eastern Transmission Corp., and Champlin Oil & Refining Co., an independent producer.

- **Ohio Fuel Gas Co.**, in its application for a \$2.9 million, or 9.7 per cent, annual natural gas rate increase, cited both the need for a 6.75 per cent rate of return and higher operating costs, which include proposed increases of its suppliers, United Fuel Gas Co. and The Manufacturers Light and Heat Co. This filing would affect 28 wholesale customers in Ohio.

- **United Fuel Gas Co.** filed a \$6.6 million, or 4.8 per cent, annual natural gas rate increase which would affect 10 wholesale customers in Kentucky, West Virginia and Ohio. Currently being collected, subject to refund, is a previously suspended increase

amounting to nearly \$11 million annually. The current filing is based upon higher purchased gas costs, higher gas transportation charges, and increased labor costs, as well as a claimed 6.75 per cent rate of return.

● In other FPC matters, Columbia Gulf Transmission Company, newly organized subsidiary of the Columbia Gas System, is seeking authorization to acquire the 845-mile transmission pipeline of Gulf Interstate Gas Co., in exchange for shares of the parent company's common stock. The acquisition will also include 389 miles of supply laterals and compressor facilities.

● The Manufacturers Light and Heat Co. has been authorized to abandon all retail gas sales in Ohio. Ohio Valley Gas Co. will serve all former retail customers of Manufacturers Light and Heat. Manufacturers Light and Heat will now sell gas wholesale to Ohio Valley Gas. This is another step in the realignment of properties of the Columbia Gas System.

● All competing proposals to serve the midwestern and north central market areas have been denied by the FPC. Midwestern Gas Transmission Co.'s proposal to build a 1,118-mile pipeline from Tennessee to the Canadian border, at a cost of \$110 million, in order to supply Canadian and domestic natural gas to 127 communities in Minnesota, Wisconsin, North Dakota and Michigan, and to two steel companies in the Chicago, Ill.-Gary, Ind. area, was rejected on the basis that the Canadian supplier has not yet acquired sufficient reserves to supply both the Canadian and

Summary of Independent Gas Producers Rate Filings, September 1958

	Number	Annual Amount
Tax rate increases allowed without suspension	1	\$ 92
Other rate increases allowed without suspension	71	269,504
Rate increases suspended	65 ^a	1,471,995 ^a
Total rate increases	137	1,741,591
Tax rate decreases allowed without suspension	1	92
Other rate decreases allowed without suspension	—	—
Total rate decreases	1	92
Total rate filings	459 ^b	—
Total rate filings acted on from June 7, 1954, to Sept. 30, 1958	31,753 ^c	—
Rate increases disposed of after suspension	9	30,845
Amount allowed	—	12,769
Amount disallowed	—	14,911
Amount withdrawn	—	3,165
Rate increases suspended and pending as of Sept. 30, 1958	1,483 ^d	\$67,024,593 ^d

^a Excludes 12 increases in amount of \$85,600 in Louisiana Tax.

^b Excludes 17 increases in Louisiana Tax.

^c Excludes 804 increases in Louisiana Tax.

^d Excludes 743 increases in amount of \$10,601,033 in Louisiana Tax.

United States markets. Furthermore, the proposed steel company sales were "not consistent with the public convenience and necessity," in that such sales would displace large off-peak sales to these companies by Chicago area distributors. The proposed \$65 million project of Northern Natural Gas Co. to supply 134 new communities in South Dakota, Iowa, Minnesota and Nebraska, and 73 other communities in the competitive areas of Minnesota and Wisconsin, was rejected on the basis that the company "failed to establish that it was able to perform its proposed service." The FPC's main contention was that part of the project, the Redfield, Iowa, natural gas storage field, had not been proved, and that Northern Natural Gas would not have gas

available to meet total first year requirements for all the new communities it wants to serve. The proposed \$32 million project of Michigan Wisconsin Pipe Line Co., designed to serve 10 distributors in Wisconsin and Michigan—nine of which Midwestern Gas Transmission proposed to serve—was rejected because of failure of proof, and lack of economic feasibility. The FPC has also denied an application by Iron Ranges Natural Gas Co. proposing a project in Minnesota, with gas to come from either Midwestern Gas Transmission or Northern Natural Gas. The companies are allowed 10 days in which to advise the FPC of their intentions to file new applications proposing projects "conceived realistically on the basis of the natural gas needs."

Chromatograph described

BECKMAN/SCIENTIFIC and Process Instruments Division has published Bulletin GC-4117, *Industrial Gas Chromatograph Model 220 Controller*. This specification sheet describes the multi-stream, multi-component controller for chromatographic analyses. It also gives explanations of instrument features, such as automatic operation, manual operation, accuracy, analysis speed, accessories, and engineering services. Instrument specifications are also listed, together with mounting dimensions.

Southern Union lays line

CONSTRUCTION OF PIPELINE facilities to bring natural gas to Milan, N. M., has been started by Southern Union Gas Co. Total cost of the project, which will consist of installation of approximately 57,000 feet of six, four and two-inch line, is expected to exceed \$100,000. When pipeline facilities are completed to Milan, Southern Union will begin gas service to some 200 homes and businesses. By next spring, an additional 300 homes are scheduled to be built. A total of about 500 additional homes is contemplated for construction within the next three years.

Atlanta Gas Light exhibit tells story of gas



This portable, three-section, 20-foot, illuminated exhibit, which tells the story of natural gas from the well to the home, has been designed by the Atlanta Gas Light Co., Atlanta, Ga., for display throughout the company's 29-county service area. Highlights of the unit are color photographs, maps of the company's system, and the illustrated story of the journey of gas

Armco Steel's Sheffield Division changes to gas for atomizing fuel oil

THE HOUSTON PLANT of Sheffield Division, Armco Steel Corp., has changed from atomizing open hearth fuel oil with steam to atomizing it with high pressure natural gas.

Investigations indicated that, by eliminating steam, a higher flame temperature could be obtained. Studies also showed that, by firing a greater proportion of gas to oil, substantial fuel savings could be effected. The flame appearance with high pressure gas is a shorter, brighter, less dense flame than is the

flame appearance with steam; and checks indicated that the high pressure gas flame is 3 per cent hotter than is the steam atomized flame.

These facts were reported at the 1958 Iron and Steel Convention by J. D. Wells, open hearth engineer, and Guy L. Rogers, works engineer, both of whom are with Sheffield.

The report also indicated that, in the process of installing the equipment for high pressure gas, considerable changes were made in

the company's piping, flow controls, and reversal system.

Another topic considered was the difference between the effects of atomizing with steam and atomizing with 200 psig and 250 psig natural gas.

Other points included in the report were control problems of rates and pressures, velocities in the atomizer tube, and comparisons of tons per hour, Btu's per ton and refractory life.

LP-Gas Council issues consumer folder

A NEW CONSUMER FOLDER promoting major LP-Gas applications is now available to members of the National LP-Gas Council. The council, which is endorsed by the Liquefied Petroleum Gas Association, Gas Appliance Manufacturers Association, and the Natural Gasoline Association of America, has prepared this folder as part of its advertising, public relations, and dealer sales aid program for the industry.

Frank T. Carpenter, president of United Petroleum Gas Co. and chairman of the council's dealer sales aid committee, described the folder as ideal for use as an envelope stuffer and for distribution at fairs, demonstrations, and in stores.

Printed on light green paper and die cut in the shape of an LP-Gas tank, it is one in a family of direct mail pieces similarly designed. It measures 3½ inches by 6¼ inches, and has a French fold which permits each of the four subjects covered to be treated on a

separate page.

The subjects included are LP-Gas for home heating, LP-Gas for cooking, LP-Gas for water heating and clothes drying, and LP-Gas on the farm. Space is provided on the fifth side of the piece for an address and a dealer imprint.

On the sixth side, consumers are told that "Wherever you live . . . LP-Gas is the modern, safe, dependable fuel for automatic heating, cooking, water heating, clothes drying, refrigeration, incineration, tractor power, irrigation, crop drying, flame weeding and many other suburban and farm uses."

Sale of the new folder is generally restricted to companies which support the council's program. However, as a special service to state associations, the folder will also be made available at regular prices for use at state fairs. Rates are: 1,000 for \$15; 1,000-5,000, \$14 per 1,000; and more than 5,000, \$13.50 per 1,000.

North Shore gives coins

IN COMMEMORATION OF its 50th anniversary, North Shore Gas Co., Waukegan, Ill., is distributing "gold" coins bearing Handy Flame and the "Naturally It's Gas" slogan on the face, and the company name and dates on the back. First presented to employees and to visitors at a county fair, the coins are now being given as a remembrance to groups during company tours, and to customers called on by sales personnel.

Hess merits Clark Medal

FREDERIC O. HESS, president of Selas Corp. of America, has been awarded the Clark Medal for "new processes for use of gas industrially." The presentation was made by The Franklin Institute, Philadelphia, on the recommendation of the Committee on Science and the Arts. Formal ceremonies took place on Medal Day, Oct. 15, at the Institute.

Homes vie, side by side, for buyers in Northern Illinois

AS A RESULT of a project called "The Cavalcade of Homes," prospective buyers in the northern Illinois area can now select

a home in supermarket style.

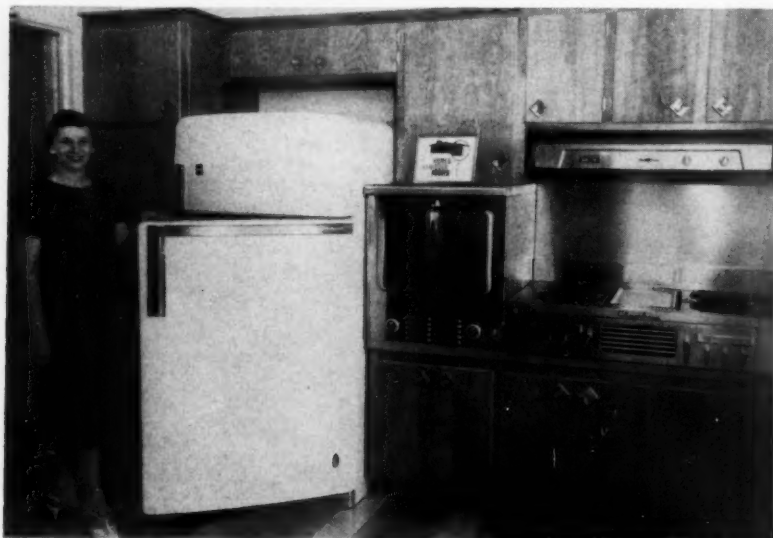
The project, which has already stimulated sales, is sponsored by nine builders, all of

whom are members of the Northern Illinois Home Builders Association, Inc., and each of whom has designed and built a model home for convenient public perusal. The 10 homes (one builder erected two models) are located in the same block on the same side of the street in Wheaton, Ill., a suburb about 25 miles west of Chicago's Loop.

In these close quarters, the 10 homes are in direct competition for the buyers' dollars. Because of this competition, each builder has concentrated on furnishing the most quality and convenience in his model. The costs of the homes vary from about \$20,000 to \$31,000. Each home is offered for erection either in the builder's own subdivision or on any lot of the buyer's choice.

Northern Illinois Gas Co., the local utility, has worked closely with the builders to incorporate natural gas into the homes. All 10 are equipped with gas heat (all-year-around gas air conditioning is optional) and automatic gas water heaters. Eight of the 10 homes feature gas for cooking, and six of them have gas built-ins, each of which is included in the cost of the home.

Two of the homes have free standing gas ranges and RCA Whirlpool "Ice-Magic" gas refrigerators. These appliances are only on display and are not included in the cost of the home.



Alice Engerer, Northern Illinois Gas Co. home service adviser, explains the advantages of the new RCA Whirlpool gas refrigerator. Two of the display homes are equipped with this model

For the gas man who has everything

What has the scent of a lemon, is white, has the life span of three generations, and burns? A dictamnus albus, of course.

A combination of rich white flowers and an abundance of foliage, this strong-smelling perennial is more commonly known as the Gas-plant. This vulgar appellation is based on the plant's peculiar ability to "burn" when ignited by a match. On a sultry summer evening, when the flowers emit a volatile oil as a vapor, this flammability—which occurs in the form of a flash—causes a quick reaction to the applied flame.

The Gas-plant, also called Burning-bush, Fraxinella, and Dittany, is a sun-loving, long-lived shrub. Once firmly established, how-

ever, it reacts badly to being uprooted.

Seeds which are sown an inch deep in the open ground, as soon as they have ripened in the autumn, will sprout well the following spring. Thereafter, when the seedlings are a few inches tall, they are transplanted to stand four to six inches apart. The following spring, the young sprouts are again replanted, this time 12 inches apart. The third spring, the plants are set into permanent position, preferably in a sunny spot. From then on, each year, the dictamnus albus will blossom three feet high and three feet broad, remaining throughout the summer as both a decorative bush and a vegetational "lightning bug."

Arkla offers credits toward replacement of air conditioning units

IN AN EFFORT to keep past customers satisfied, Arkla Air Conditioning Corp. recently conducted a "Trade Out" program on outdated models.

It had been estimated by the company that some 20,000 air conditioning units manufactured by Servel, Inc., had already passed the period of warranty protection and were frequently presenting many service and operational problems. In an attempt to smooth customer relations and to keep customers from becoming "irate defectors to the competition," Arkla initiated the replacement program.

In this program, which extended from

Sept. 15 to Nov. 15, the corporation offered credits on the old models toward the purchase of the new Sun Valley models. The unit credit schedule was: all model 500, \$225; all model 750, \$300; all model 750 H, \$315.

A "Trade Out" unit had to be used specifically for the purpose of replacing a Servel-made unit. Arkla issued the "Trade Out Credit" allowance at the rate of one such credit for each 13 units shipped, after having received the serial number of the Servel unit replaced, the name of the owner, and a written notice of the replaced unit's disposition.

An exception to this plan applied in the

Book lauds wood cabinets

AN EIGHT-PAGE BOOKLET on the advantages of factory-engineered wood kitchen cabinets has been published by the National Institute of Wood Kitchen Cabinets. Directed to builders and homemakers, the booklet cites the following 10 reasons for specifying factory-engineered wood cabinets: quality names help to sell, factories back up products, superior construction, better design and styling, more convenience features, complete modular flexibility, consistent quality, fine finishes, quick installation, and best buy for the money. A free copy of the booklet is available from the National Institute of Wood Kitchen Cabinets, 75 East Wacker Drive, Chicago 1, Ill.

U. S. legislation studied

A NEW STUDY, entitled *Federal Regulation of Natural Gas in The United States*, has been compiled by Edward Falck, consultant, and Francis X. Welch, editor, *Public Utilities Fortnightly*. The 100-page publication includes a summary of the Federal Trade Commission Investigation and the Splawn Report, an explanation and critique of utility regulation in the U. S., the salient features of the Natural Gas Act and its amendments, certificates of public convenience and necessity, rate cases under the Natural Gas Act, and export and import licenses. The book is available, at \$2 per copy, from the publisher, Edward Falck Co., 1625 Eye Street N.W., Washington, D. C.

Barrie, Ont., gets gas

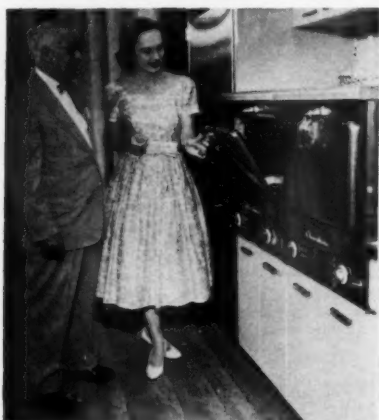
BARRIE, ONT., a thriving community 50 miles from Toronto, has become the first section in the Georgian Bay-Muskoka area to receive natural gas. Mayor W. L. Kinzie of Barrie and Consumers' Gas Co. officials jointly turned on valves and set off light flares to mark the arrival in mid-September of the new fuel. Federal, provincial, civic, and Consumers' Gas officials participated in the brief ceremony which opened the new Barrie gas distribution system. The gas is already available to homes, business and industry in Barrie, as well as in other communities along Georgian Bay to Collingwood and Owen Sound, which began receiving natural gas in mid-October.

Peoples Natural Gas aids beauty contest



These 16 lovely ladies represented The Peoples Natural Gas Co. in the Miss Torch contest held recently in Pittsburgh. Sponsored by the United Fund, the contest was designed to produce a Miss Torch for 1958-59. Miss Torch serves as official hostess at United Fund functions during the year. Both the contest and Peoples received wide publicity in the Pittsburgh newspapers.

Six-day cooking clinic attracts 7,300 shoppers in Boston



John J. Quinn, vice-president, Boston Gas Co., and Mrs. America, Helen Giesse, inspect built-in gas range at Jordan Marsh cooking clinic

MORE than 7,300 Greater Boston men and women attended a week-long "Cooking Clinic," sponsored recently by Jordan Marsh,

a leading New England department store; Chambers Range Co. and its area distributor, Northeastern Distributors; and Boston Gas Co.

In addition to the delegates to the clinic, thousands of shoppers at Jordan Marsh saw the cooking demonstrations and heard the product discussions over closed circuit-color television sets which were placed throughout the store and at the Jordan Marsh shopping centers west and north of Boston.

As a result of the promotion, many Chambers matchless, free-standing ranges and complete built-in kitchens were sold. In addition, hundreds of requests—possibilities for future sales—were placed with salesmen.

Mrs. America, Mrs. Massachusetts, Mrs. Rhode Island, and Louise Morgan, Boston's first lady of television, attended the brunch which initiated the six-day clinic. Throughout the clinic, 18 culinary authorities appeared and presented their special recipes. Cooking demonstrations were also given by both Margaret McPherson of Boston Gas and Ted Fraser, chef for Chambers Range.

Publicity for the clinic included advertisements each day in all Boston newspapers, 14

spots daily on radio and television, stories in newspapers, and signs placed throughout the store. One Jordan Marsh display window presented a \$3,000 model kitchen.

On the display stage in the store's modern, new auditorium was a complete pink metal Tracy American built-in kitchen, including two Chambers gas ovens and a deluxe Chambers four-burner griddle counter unit in copper tone. Other appliances featured were copper and cherry red Chambers free-standing ranges, and five fully equipped built-in kitchens, including 13 additional Chambers free-standing ranges.

Each person who attended the clinic's exhibitions was given a contest entry blank and was asked to write, in 250 words or less, about the advantages of cooking with a Chambers gas range. The prize was a \$3,000 kitchen. Contest judges were five newspaper, radio and television personalities, and Susan A. Mack, home service director, Boston Gas.

Coordinators of the show were James Kimball, Chambers Range; George Alexander, Northeastern Distributors; Frank Noonan, director of dealer sales, Boston Gas; and Jordan Marsh and its advertising agency.

Swoyer heads group studying air, gas cleaning equipment standards

ROBERT H. SWOYER, SR., mechanical engineering department, Pennsylvania Power and Light Co., has been elected chairman of Sectional Committee Z74, a group concerned with the fundamentals of performance of effluent air and gas cleaning equipment.

The committee, which operates under the auspices of the American Standards Association, was established recently to develop performance standards which would permit the

measurement of the comparative effectiveness of air cleaning equipment and dust collectors of different makes. At present, there are no uniform testing methods to measure the performance of such equipment, which is particularly important in the fields of industrial hygiene, air conditioning, and air pollution control.

Mr. Swoyer represents The American Society of Mechanical Engineers on Sectional

Committee Z74. The ASME and the American Society of Heating and Air Conditioning Engineers are co-sponsors of the Z74 research project.

The American Standards Association is the national clearinghouse and coordinating body for voluntary engineering, industrial, safety, and consumer standards. A federation of 119 trade associations and technical societies, it has more than 2,000 company members.

LILCO contracts to buy gas from Texas in order to keep low costs

LONG ISLAND LIGHTING CO. has entered into a 20-year contract with Valley Gas Transmission, Inc., for the purchase of natural gas in amounts up to 32,500,000 cubic feet per day by Jan. 1, 1960. Contract terms call for the purchase of 17,500,000 cubic feet per day, starting about March 1, 1959.

According to John J. Tuohy, LILCO president, the company will enter into a transportation agreement with Transcontinental Gas Pipe Line Corp. to transport from Texas to New York the natural gas to be purchased

from Valley Transmission. "Such a transportation service," explained Mr. Tuohy, "will replace an equivalent amount of gas presently purchased from Transcontinental."

Mr. Tuohy called attention to the fact that going to Texas to buy gas was a departure by LILCO from its traditional practice of purchasing gas from pipeline companies. LILCO now is supplied by Transcontinental Gas Pipe Line Corp. and the Tennessee Gas Transmission Co. As of November, Texas Eastern Transmission Corp. also will be a supplier.

The Valley gas will come to LILCO from the five south Texas counties of Starr, Hidalgo, Brooks, Jim Wells and Victoria. "The gas will be purchased from Valley Gas Transmission, Inc., at the point of delivery into the Transcontinental line, and is of jurisdictional status," Mr. Tuohy said.

"Though it would be easier and simpler to purchase gas from a pipeline company," Mr. Tuohy added, "the purchase in Texas will result in helping LILCO maintain for the foreseeable future a low price for natural gas."

New Roper automatic gas range combines cooking, heating units

A NEW KITCHEN-HEATER gas range, manufactured by the Geo. D. Roper Sales Corp., operates as both a cooking and a heating facility at the same time. Introduced on the market recently, the new line includes both 36- and 40-inch models.

The steel heat-exchangers used on the new models are finished with Dura-Tube high-heat resistant porcelain enamel. A fire-fusing proc-

ess first developed to protect war planes from extreme temperatures, Dura-Tube was later used in home-heating furnaces. The material is said to speed heat transfer and to resist burning out, cracking and corrosion. A trademark of Surface Combustion Corp., Dura-Tube is specially licensed for use in Roper kitchen-heater gas ranges.

A room thermostat regulates the heating

function automatically and keeps room temperatures comfortably uniform. The heater lighting is automatic.

Included in the range's cooking facilities are Roper's "Tem-Trol" automatic top burner, "Circle-Simmer" speed top burners, electric timer alarm-time clock, king-size 20" "Bake-Master" oven, and "Silent-Roll" smokeless broiler.

C. C. Phillips retires as Ohio Fuel Gas vice-president and director

CLYDE C. PHILLIPS, vice-president and a director, The Ohio Fuel Gas Co., retired Oct. 1.

Mr. Phillips, who had managed Ohio Fuel's transmission department since 1929, started with Ohio Fuel in 1910 as timekeeper for a gas line repair crew of several hundred workers. In 1912, he was transferred to Ohio Fuel's payroll department.

In 1914, Mr. Phillips moved to the gas measurement department as chief clerk, later

was made assistant superintendent, and in 1926 became general superintendent. He was promoted to transmission manager in 1929.

In 1934, Mr. Phillips was given the additional job of managing the personnel department. A year later, he was assigned to manage the motor transport department. He later relinquished these two assignments.

Mr. Phillips was elected a director in 1946, and vice-president in 1950.

Mr. Phillips, who is credited with the

development of Ohio Fuel's first employee training school, served as defense chairman for the company during both world wars and the Korean conflict.

A past president of the Lions Club, Mr. Phillips also served for a number of years on the Grandview Board of Education and with various civic organizations in Columbus, Ohio. He is a member of the American Gas Association and the Columbus Chamber of Commerce.

Personal and otherwise

Twedy vice-president

JOHN B. TWEDY has been elected a vice-president of Southern Natural Gas Co. He will be located in New York.

Mr. Twedy was formerly a partner in the Denver, Colo., law firm of Twedy & Fowler. From 1950 through 1956, he was a director of Southern Production Co., Inc. He became assistant to the chairman of the board of directors of Southern Natural Gas in 1957.

Mr. Twedy is also assistant to the chairman of the board of directors and a director of The Offshore Co., a subsidiary of Southern Natural Gas.

Lang named vice-president

JOSEPH H. LANG has been elected a vice-president of The Ohio Fuel Gas Co.

Manager of the company's transmission department, Mr. Lang supervises the operation and maintenance of the transmission pipeline system and compressor and gas measurement stations. Mr. Lang started with Ohio Fuel as a mechanic in 1914, became gas measurement superintendent in 1930, general superintendent of pipelines in 1935, assistant manager of transmission in 1951, and manager of transmission in October. He was elected an assistant vice-president last February.

Arkla elects C. L. May chairman of the board, R. K. Eskew vice-president

ARKLA AIR CONDITIONING CORP. has announced a new slate of officers and directors.

Chester L. May, who retired recently as senior vice-president of Lone Star Gas Co., has been elected chairman of Arkla's board of directors. He is a former director of the American Gas Association.

Robert K. Eskew, director of research, development and engineering for Arkla, has been named a vice-president. He is nationally

known for his contributions as a pioneer in the field of all-year gas air conditioning. Mr. Eskew was with Servel, Inc., until 1936.

Other officers are W. R. Stephens, president of Arkla and president and chairman of the board of Arkansas Louisiana Gas Co., which owns the air conditioning firm; D. W. Weir, E. N. Henderson and L. E. Walbridge, vice-presidents; F. L. Holleman, secretary and assistant treasurer; James E. Chisum, treasurer and assistant secretary; and Carlisle M.

Schrader, assistant treasurer.

Arkla's directors are Messrs. Stephens, Weir and Henderson; L. L. Baxter, president, Arkansas Western Gas Co.; B. E. Harrell, vice-president, Arkansas Louisiana Gas Co.; Dallas P. Raney, Little Rock, Ark., investment executive; W. W. Selzer, director of business promotion, Columbia Gas System Service Corp.; S. R. Walker, president, Ft. Smith Gas Corp.; and C. H. Zachry, president, Southern Union Gas Co.

Moxness succeeds McArthur as president

G. R. MCARTHUR retired Nov. 1 as president and chief executive officer of Northwestern Public Service Co. At the same time, he became vice-chairman of the company's board of directors. He is also a director of Northwestern Public Service.

S. A. Moxness, a vice-president and director, has succeeded Mr. McArthur.

A. D. Schmidt, formerly superintendent of gas properties, has been elected vice-president-operations.

Mr. McArthur joined the company in 1930, was elevated to the board of directors in 1934,

became vice-president in 1937, and was elected president in 1955.

Mr. Moxness, who became associated with Northwestern in 1933, became chief accountant in 1934, was named manager of the company's Huron division in 1944, was elected vice-president in 1955, and was chosen a director last April.

Mr. Schmidt started with the company in 1949 as a cadet engineer. Since then, he has served as gas engineer and safety director, assistant superintendent of production and, until now, superintendent of gas properties.

Johnson heads committee

GEORGE B. JOHNSON, executive vice-president, Minneapolis Gas Co., has been named chairman of the ASA Sectional Committee, Project Z21, American Gas Association Approval Requirements Committee. The group, which is a sectional committee of American Standards Association, Inc., supervises the preparation of the national standards for the approval and installation of gas appliances and accessories. Mr. Johnson has been an active participant in various projects and affairs of both A. G. A. and the Midwest Gas Association.

A. R. Bailey elected executive vice-president

ALAN R. BAILEY has been elected executive vice-president of Southern Counties Gas Co. A member of the company's board of directors, he became senior vice-president in 1956.

Prior to joining Southern Counties, Mr. Bailey was assistant to the president of Pa-

cific Gas & Electric Co., San Francisco. Before that, he was operating vice-president of Coast Counties Gas and Electric Co., which was merged with P.G. & E. in 1954.

Mr. Bailey is a director of the Pacific Coast Gas Association and a member of the PAR Committee of the American Gas Association.

C. I. Francis retires

CHAS. I. FRANCIS, Houston, Texas, attorney, has resigned as vice-president and general counsel of Texas Eastern Transmission Corp. A practicing attorney in Houston since 1935, Mr. Francis was vice-president, general counsel and a director of the company since 1947.

Names in the news—a roundup of promotions and appointments

UTILITY

A. Otis Smith has been named supervisor of realtor relations, a newly created division in the sales department of Washington Natural Gas Co. Mr. Smith joined the company in 1955.

Several personnel changes have been announced by Southern California Gas Co. C. R. Rikel has been promoted to executive assistant, reporting to the senior vice-president. Mr. Rikel, who began his career in 1946 as an air conditioning engineer, and became central division sales manager in 1957, succeeds G. H. Pickett, who has been appointed manager of procedures analysis. In other developments, A. G. Crews has been advanced to industrial sales supervisor, and S. W. Lynch has been elevated to San Fernando Valley division sales manager.

Marjorie Fazackerley, home service director, Northwestern Utilities, Ltd., has transferred to the firm's affiliate, Canadian Western Natural Gas Co., Ltd., in order to appear on a new 27-week series of television cooking programs.

Southern Union Gas Co. has announced a group of personnel changes. E. C. Reddy, Albuquerque district manager, has been named El Paso district manager. Mr. Reddy, who joined the company in 1929, succeeds Davis Butler, who has become manager at Roswell, N. M., for Lea County Gas Co. C. A. Stockhoff, Albuquerque district sales manager, has replaced Mr. Reddy as manager of the district. Mr. Stockhoff joined Southern Union in 1957. Ralph Rogers, sales supervisor in Albuquerque since 1957, has been named to replace Mr. Stockhoff. Mr. Rogers started with the firm in 1952. Frank D. Jernigan, director of general and special accounting, has been transferred to the rate and special projects department. Mr. Jernigan, who became associated with the company in 1936, has been succeeded by Everitt Baker. Formerly chief accountant, Mr. Baker joined the organization in 1952. George S. Davis, previously with Peat, Marwick, Mitchell and Co., Dallas, has replaced Mr. Baker. W. F. Wright, Jr., has been appointed utilization manager for Southern Union. He was formerly with a firm of mechanical engineers. Sterling Russell has been named utilization engineer for the company's Galveston and Port Arthur, Texas, districts. He was previously with Union Carbide Chemicals Co.

George L. Stockman has been appointed manager of sales promotion, a new post at The East Ohio Gas Co. Mr. Stockman was formerly with Bird, Inc., Wapole, Mass., roofing and siding material manufacturer.

North Shore Gas Co. has announced two promotions. Clayton E. Baird, a veteran of 33 years with the firm, has become sales manager, and O. H. Nibbelink, who joined the company in 1930, has been named Waukegan district manager.

Several personnel shifts have taken place at Southern Counties Gas Co. R. M. McIntyre has been appointed to the newly created post of market development manager. Mr. McIntyre, acting sales manager in

the firm's Orange County division since 1957, has been replaced there by Donald O. Burdick, formerly sales manager of the Santa Barbara division. Mr. Burdick has been succeeded by W. D. Simonsen, previously staff representative, appliance merchandising, Los Angeles sales department. Mr. Simonsen, in turn, has been replaced by W. J. Altpeter, previously new business supervisor, sales department, Santa Monica Bay division. Ted Stern, staff assistant in the personnel department, has succeeded Mr. Altpeter.

Two promotions and one retirement have been announced by New York State Natural Gas Corp. Harry McNeely, who has been with the company 40 years, has become superintendent of the Mamont district, Murrysville, Pa. He replaces Ewing C. Gordon, who has retired after 40 years with New York State Natural and its affiliate, The Peoples Natural Gas Co. Mr. McNeely was previously assistant superintendent. John L. Holder has been named to succeed Mr. McNeely. Mr. Holder was formerly foreman in the Sabinsville, Pa., district.

The Connecticut Light and Power Co. has promoted Wilbur B. Couch to the newly established post of security coordinator on the operating staff. He was formerly an engineer in the firm's Meriden district. In another development, George W. Russell, public and employee relations assistant for the central division, has become manager at Niantic. He succeeds the late John F. Tucker.

William J. King has been appointed sales manager of Peoples Gas System's West Coast division. He was previously sales representative in the Sun Coast area for L. P. G. Equipment Co., Orlando, Fla.

Bruce Jones has been named manager of supply and distribution for La Gloria Oil and Gas Co. He was formerly products coordinator for the firm.

Five staff changes have been announced by The Ohio Fuel Gas Co. Mildred Ann Smith has been named director of research in the home service department. She was previously home service director for Nashville Gas Co. Nancy C. Hutchison, Yvonne E. LaHoud and Sheila A. Castellarin have been appointed home service advisers. Each of the three holds a Bachelor of Science degree from Ohio State University. Robert V. Benjamin has been named an attorney in the company's legal department. He was formerly an attorney for B. H. Putnam and Associates, oil and gas producers.

Guy T. Henry and Paul R. Haas have been elected members of the board of directors of Algonquin Gas Transmission Co., Boston. Mr. Henry is president of Providence Gas Co. Mr. Haas is administrative vice-president of Texas Eastern Transmission Corp.

Ralph C. Bain has been named an executive assistant at Arkansas Louisiana Gas Co. Formerly a supervisory engineer, he joined the company in 1948.

Northern Illinois Gas Co. has announced a group of promotions. William E. Preston,

central division manager, has been named to the new post of director of planning. Daniel E. Garrity, western division manager, succeeds Mr. Preston. Roy W. Holdiman, Fox Valley district manager, replaces Mr. Garrity. George C. Habenicht, Ottawa district operating superintendent, succeeds Mr. Holdiman. James F. Ahern replaces Mr. Habenicht. Robert J. Eby, central division commercial manager, has been appointed to the new position of assistant central division manager. David T. Strieff, Rock River district manager, succeeds Mr. Eby. Edward B. Boyd replaces Mr. Strieff.

MANUFACTURER

James A. Dayton has been elected vice-president-manufacturing of American Meter Co. He was previously a director, executive vice-president, and secretary of Turner & Seymour Manufacturing Co.

Frank Colonnese has been appointed superintendent of the Bridgeport thermostat division, Robertshaw-Fulton Controls Co. He joined the firm in 1946 and was formerly assistant superintendent.

Cary A. Austin has been named field sales training coordinator for the Norge Division of Borg-Warner Corp. He was previously district manager for eastern Pennsylvania, Maryland and Washington, D. C.

John J. McMahon has been promoted to the newly created post of sales manager for Maytag Southeastern Co., distributor of Maytag appliances in Georgia and Alabama. Mr. McMahon became associated with the firm in 1949 and was formerly sales coordinator of the western division of the distributorship.

E. Ewing Keith, assistant to the president, Temco, Inc., has been named sales manager of the company's newly acquired Magic Chef-Wonder Warm division. Mr. Keith joined the firm last May.

William S. Howland has been appointed eastern manager of heating sales for John Wood Co.'s heater and tank division. He joined the company three years ago as special field representative.

OTHER

Daniel A. Johnston, Reading, Mass., has received the American Gas Association Certificate for Parts I and II of the course in American Gas Practice.

Smith retires after 39 years

T. K. M. SMITH, first president of the Southern California Meter Association and a special staff assistant for Pacific Lighting Gas Supply Co., retired Oct. 1. Mr. Smith joined Southern Counties Gas Co., a Pacific Lighting affiliate, in 1919. He became a meter reader for Industrial Fuel Supply Co., forerunner of Pacific Lighting, in 1920. For many years thereafter, he was the one-man meter department of the company. The meter association, which Mr. Smith was instrumental in organizing in 1927, now has more than 650 members in the United States, France, Venezuela, Mexico and Canada.

OBITUARY

Thomas J. Strickler

retired vice-president and general manager, Kansas City, Mo., division, The Gas Service Co., and past president of the American Gas Association, died Nov. 20 after major surgery for a ruptured aorta. He was 75.

Mr. Strickler, who had been chief engineer for the Kansas Public Service Commission from 1913-20, joined Empire Gas & Fuel Co., Bartlesville, Okla., in 1920. He was later affiliated with Cities Service Co.

From 1927-47, Mr. Strickler served as vice-president and manager of Kansas City Gas Co. When that firm merged with The Gas Service Co. in 1947, he became vice-president and manager of the Kansas City division of the new company. He also served for many years as a member of the organization's board of directors.

Mr. Strickler, who was known to his friends as "Major," was A. G. A. president during 1940-41. He also was active on numerous Association committees.

A director of the United States Chamber of Commerce for 12 years, he was also a consultant to the Petroleum Administration for Defense, and to the gas planning division of the Department of the Interior. Mr. Strickler was also active throughout his life in the affairs of a great many civic, educational and welfare organizations.

Mr. Strickler's wife, Margaret, died earlier this year. He leaves no survivors.

Joseph A. Gallagher

director of publicity, Public Service Electric and Gas Co., Newark, N. J., died suddenly Nov. 1 at the age of 60.

Mr. Gallagher, who had been with Public Service 34 years, became director of publicity in 1945.

A life-long resident of Plainfield, N. J., Mr. Gallagher started his career in 1915 as a newspaperman on the old *Plainfield Daily Press*. He later became a reporter for, and then sports editor of, *The Plainfield Courier-News*. He also served as a Plainfield recreation commissioner, and wrote sports news for the old *Newark Sunday Call*.

Mr. Gallagher is survived by his wife, two daughters and a son.

George H. Peachey, Jr.

superintendent, Boston Gas Co. Street Division, Central District, died Aug. 7. He had been with the company for 49 years.

Mr. Peachey began as a fitter's helper in 1909. He became superintendent of his department in 1949. Mr. Peachey was a member of both the American Gas Association and New England Gas Association Operating Sections.

He is survived by his wife, Muriel, a son and two grandchildren.

Howard W. McDade

land and lease department manager, Southern Union Gas Co., died November 2 after a heart attack. He had been with the company 19 years.

Surviving are his wife, two daughters and six grandchildren.

Statement Required by the Act of August 24, 1912, as Amended by the Acts of March 3, 1933, and July 2, 1946 (Title 39, United States Code, Section 233) Showing the Ownership, Management and Circulation of

The American Gas Association Monthly published monthly, except July and August, bi-monthly then; at Brattleboro, Vermont for October 1, 1958.

1. The names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, American Gas Association, Inc., 420 Lexington Ave., New York 17, N. Y.; Editor, Walter H. Dyer, 420 Lexington Ave., New York 17, N. Y.; Managing editor, None; Business manager, None.

2. The owner is: American Gas Association, 420 Lexington Ave., New York 17, N. Y.; President, Robert W. Otto; 1st Vice President, A. W. Conover; 2nd Vice President, J. Theodore Wolfe; Treasurer, Vincent T. Miles; Assistant Treasurer, James F. Daly; Managing Director, Chester S. Stackpole; Secretary, Jac A. Cushman (all of 420 Lexington Ave., New York 17, N. Y.)

3. The known bondholders, mortgagees, and other security holders owning or holding 1 percent or more of total amount of bonds, mortgages, or other securities are: None.

4. Paragraphs 2 and 3 include, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting; also the statements in the two paragraphs show the affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner.

WALTER H. DYER, Editor.

Sworn to and subscribed before me this 7th day of October, 1958.

ROBERT J. CUTTING
NOTARY PUBLIC, STATE OF NEW YORK
No. 30-5895810
Qualified in Nassau County
Term Expires March 30, 1960

CONVENTION CALENDAR

1959

MARCH

- 2-4 •General Management Section Conference, Hotel Statler, Cleveland, Ohio.
- 9-11 •Mid-West Gas Association, Annual Meeting and Convention, Hotel Ft. Des Moines, Des Moines, Iowa.
- 19-20 •New England Gas Association, Annual Meeting, Hotel Statler, Boston, Mass.
- 26-27 •Oklahoma Utilities Association, Annual Convention, Mayo Hotel, Tulsa, Okla.

APRIL

- 1-3 •GAMA Annual Meeting, The American Hotel, Bal Harbour, Fla.
- 6-9 •Operating Section Distribution Conference, Netherland-Hilton Hotel, Cincinnati, Ohio.
- 7-9 •Sales Conference on Industrial and Commercial Gas, Hotel Warwick, Philadelphia, Pa.
- 15 •The Metropolitan Gas Heating & Air Conditioning Council, A. G. A. Headquarters, New York City.
- 20-22 •A. G. A.-EEI Accounting Section Conference of Electric & Gas Utility Accountants, Sherman Hotel, Chicago, Ill.
- 23-24 •Indiana Gas Association, French Lick-Sheraton Hotel, French Lick, Ind.
- 27-29 •Southern Gas Association, Annual Convention, New Orleans, La.

MAY

- 3-6 •LPGA Annual Meeting, Conrad Hilton Hotel, Chicago, Ill.
- 5-7 •Research and Utilization Conference, Hotel Carter, Cleveland, Ohio.
- 11-12 •A. G. A. Eastern Gas Sales Conference, The Netherland-Hilton Hotel, Cincinnati, Ohio.
- 18-19 •Operating Section Transmission Conference, Statler-Hilton Hotel, Dallas, Texas.
- 18-20 •A. G. A. Mid-West Regional Gas Sales Conference, Edgewater Beach Hotel, Chicago, Ill.
- 19-21 •Pennsylvania Gas Association, Pocono Manor Inn, Pocono Manor, Pa.
- 20 •The Metropolitan Gas Heating & Air Conditioning Council, A. G. A. Headquarters, New York, N. Y.
- 21-22 •The Natural Gas and Petroleum Association of Canada, Hamilton, Ontario.
- 25-27 •Operating Section Production Conference, Hotel Sheraton, Rochester, N. Y.

Personnel service

SERVICES OFFERED

Manager Controller System Analyst—25 years utility experience all phases and departments. Heavy Operation and System, accounting, clerical, field, all machines (including IBM punched card and EDPM). General Accounting, Stores, Payroll, Purchasing, Payables, C/PK, Service Records and Orders, Construction, Work Orders, Post Card Billing, Consumption Analyses, Mechanical Cash Posting, etc. Procedures, flow charts, form design, wiring, scheduling and instruction. Public Accounting and Consulting experience. BS Accounting—age 46—married—1 child. 1937.

Manager of Utility Sales—twelve years uninterrupted association with top line of major appliances widely merchandised by utilities. Excellent and long established contacts at management levels with all major merchandising utilities in New England, New York, New Jersey, Pennsylvania, Delaware and Maryland. Thoroughly familiar with utility merchandising policies. Outstanding record in sales, sales training and merchandising. Married. Graduate of leading eastern university. Will relocate. 1938.

Sales Manager—strong utility background, basically trained in residential sales of both gas and electrical appliances. Twenty years experience with top name appliance manufacturers. Product specialist, district, and regional sales manager. Traveled entire Eastern U.S., supervising and developing distributors, and dealers. Good dealer coordinator, field merchandising man, highly promotional, with good contacts. Immediately available. Salary open. 1939.

Sales Executive—experienced in year round heating and cooling. Heating background from domestic installations to high pressure steam plants. Air conditioning from window units to central installations including central station, low temperature refrigeration and ammonia design and survey. Twenty-five years in industry. Formerly product sales manager, heating and cooling, for leading air conditioning manufacturer. Resumé if desired. 1940.

Management—the health of our only child requires a change of climate. Above average managerial abilities and experience. Broad experience in natural gas and combination companies. Not immediately available. Age 43. 1941.

Washington Public Relations—have had more than 30 years' experience in every phase of government work. Can expedite all matters needing attention in Capitol. Will welcome queries. Can furnish best of references. Married. 1942.

POSITIONS OPEN

Assistant District Foreman—supervision of high pressure gas transmission pipeline construction, maintenance and operation. Engineering background desired with three to five years experience in pipeline work, including supervisory responsibilities. Position offers excellent opportunity for advancement to higher management. Location, New England. Send resumé of education, experience and salary expected. 0877.

Industrial Gas Equipment Sales Engineers—several most desirable territories available for active experienced representatives capable of recommending and selling quality gas burners, melters and heat treating furnaces direct to users, as well as for resale. Compatible with some other industrial burners and furnaces. Nationally advertised, 50 year company. Send full resumé. 0878.

Manufacturer of Gas Equipment—need lifetime engineer capable of assisting medium sized established industrial gas burner and furnace manufacturer with sales, recommendations, projects and other various phases in small office. Only honest, personable and determined persons who are most pleasant to work with and willing to prove themselves need apply. Vicinity New York City. Give complete resumé, starting salary, recent photograph. 0879.

Gas Property Manager, New England—manufactured and bottled gas utility operation of a nationwide company has a challenging

opening for a progressive, sales minded manager. Send complete resumé of experience. 0880.

Gas Engineer—opening in growing gas utility in western states. Graduate engineer to supervise construction, maintenance, operation, metering and pressure regulation. To design and plan system expansion and convert LPG operations to natural gas. Liberal benefits. Salary commensurate with experience and ability. Future work will also permit broad experience in other phases of public utility work in addition to gas distribution. Reply stating experience, educational qualifications, salary and personal background. 0881.

Assistant Superintendent, Gas Distribution—with experience in maintenance, design and construction of mains and services. Should have working knowledge of regulating and control equipment. Prefer man under 40 with technical training. Position is with New England natural gas utility. Salary dependent on training, experience and ability. Replies should include resumé. 0882.

Sales Supervisor—large and growing mid-west gas utility has opening for aggressive salesman in commercial department of sales division. Will contact restaurants, hotels and other commercial establishments for the promotion of gas installations and service. No traveling. Position offers excellent advancement opportunity. Gas company experience preferable; commercial and/or industrial experience essential. Salary open. Give age, education, experience and salary requirements. 0883.

Assistant Distribution Superintendent—a west coast Florida utility currently expecting the arrival of natural gas desires services of an experienced man between the ages of 25 and 40 years. Some technical education desirable. 0884.

General Manager—new natural gas utility, serving population 100,000, to be vice-president and general manager. Diversified and successful operating experience essential. Attractive salary, liberal benefits and stock option. All replies held in strictest confidence. 0885.

Peoples Gas Light and Coke creates department, announces promotions

SEVERAL PERSONNEL and organization changes have taken place in the operating division of The Peoples Gas Light and Coke Co. These changes are the result of the creation of the gas supply department.

Elmer F. Schultdt has been promoted to chief operating engineer. He succeeds Robert O. Moriarty, who retired Nov. 1 after 32 years with the company. Mr. Schultdt, who joined Peoples Gas in 1922, became an operating engineer in 1956. In 1937, he won the American Gas Association's Beal Award for a paper on "A Precision Method of Lo-

cating Gas Leaks."

The company's production and gas dispatching departments have become, respectively, the station and gas dispatching sections of the new gas supply department. The transportation department has been changed to the transportation section of the distribution department, and the meter shop section of the service department has become the meter testing and repair section of the testing department.

Willard J. Ball and Chris J. Poppelreiter have been appointed general superintendent

and assistant general superintendent, respectively, of the gas supply department.

In addition, Thomas R. Bogumill has been designated assistant general superintendent of the service department; Willis C. Holder has become assistant general superintendent of the distribution department; George L. Morrow has been promoted to superintendent, south district, service section; John P. Clennon has become assistant superintendent, north district, service section; and Charles M. Jensen has been advanced to assistant superintendent, gas dispatching section.

Southern Union conducts safety program

AN INTENSIVE accident prevention program, designed to alert the public about the safety hazards which can exist in the average home, was conducted by Southern Union Gas Co. during October. The campaign was launched in company-served communities in New Mexico, Arizona, Colorado and western Texas.

The program, which called attention to ways of eliminating common types of hazards found in the home, placed special emphasis on the proper use and care of gas

appliances and venting equipment. It was sponsored in a series of newspaper advertisements and articles, and radio announcements.

A check-list booklet, which points out that "accidents don't just happen . . . they are caused by carelessness," was prepared in conjunction with the program for use by schools, churches and youth organizations. Copies of the booklet—entitled "Do You Live in a Home Safe Home?"—may be obtained free of charge by writing to Southern Union Gas Co., Burt Building, Dallas 1, Texas.

Begin new headquarters

GROUND WAS BROKEN recently for Northern Illinois Gas Co.'s new Lake District headquarters at Crystal Lake.

Located on a nine-acre site on Route 176, about one and one-half miles east of Route 14 in Crystal Lake, the new facilities will replace presently leased property, and will permit the concentration of Crystal Lake operations. All of the operating, construction, sales and service activities of the Lake District will be directed from the new Northern Illinois Gas headquarters.

A.G.A. advisory council

E. R. ACKER.....Poughkeepsie, N. Y.
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WISTER H. LIGON.....Nashville, Tenn.
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General Research Planning Committee

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APPROVAL REQUIREMENTS COMMITTEE

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Man. Dir.—Robert R. Suttle, 1524 Life of America Building, Dallas, Texas.

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Pres.—Floyd L. Larkin, Wisconsin Electric Power Co., Milwaukee, Wis.
Exec.-Sec.—Dale F. Hansman, 135 West Wells St., Milwaukee, Wis.

American Gas Association

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WASHINGTON OFFICE • Room 804, Security Bldg., 739 15th St., N.W., Washington 5, D. C.

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Operating Section	ROBERT C. JONES	New England Electric System, Malden, Mass.
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